TRADE AND INDUSTRY

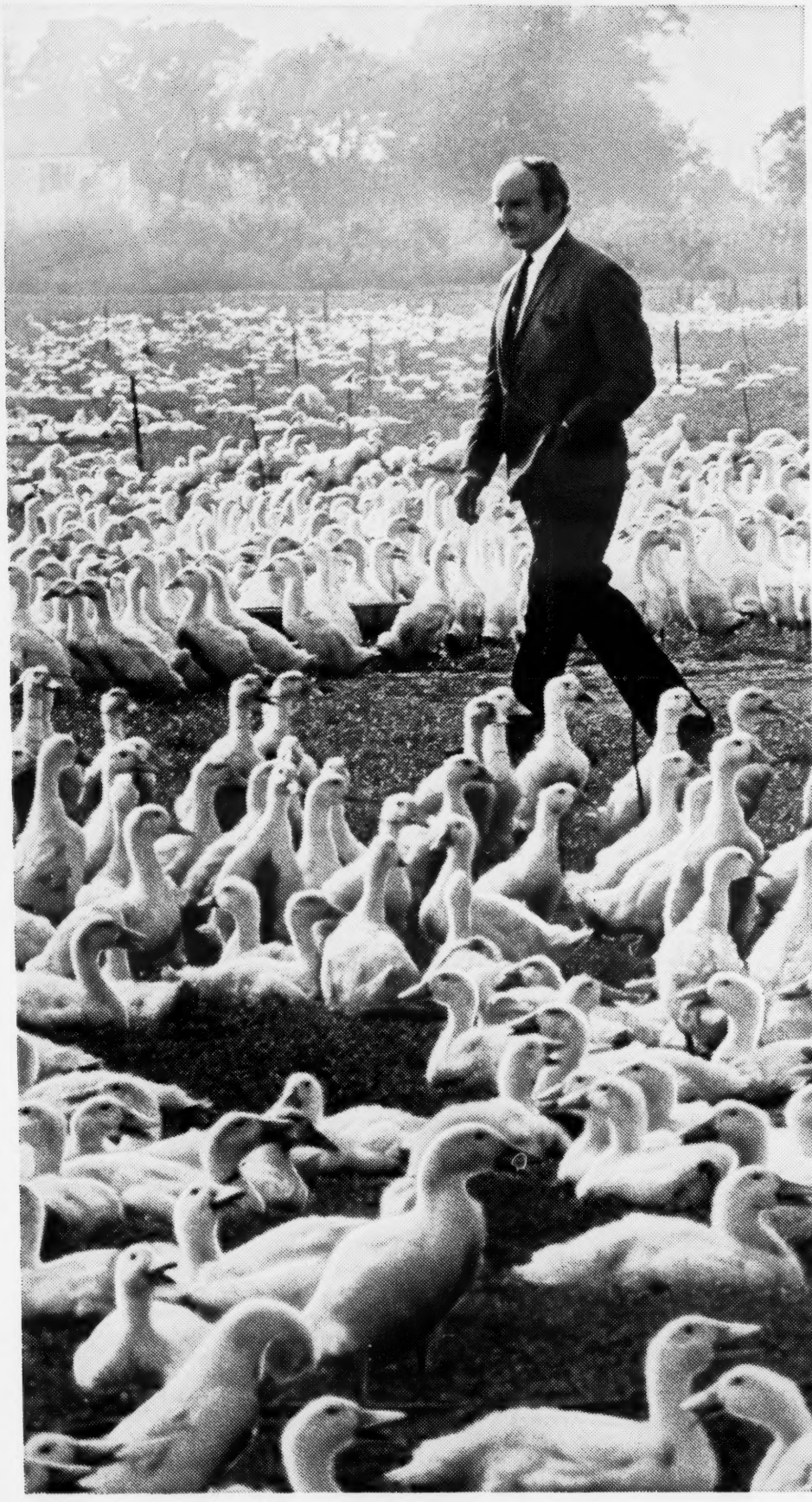
30 December 1971 Volume 5 No 13 10p

Denmark: model farms and modern factories

National Food Survey: household food consumption in the third quarter

Kennedy Round tariff negotiations

New Technology looks at COST, automated chemical analysis, new uses for timber, and remote automatic computing equipment.



Even ducks need export cover.

'It's tough selling ducks overseas. We wouldn't make it harder by selling them without ECGD credit insurance.' *Mr J.H.B., sales director, seen here with some of the birds his company exports.*

Three million ducks a year are raised on this 900-acre farm in Lincolnshire.

Many of them are exported in oven-ready form to the Caribbean and the Far East. Day-old birds are also sold overseas, to many countries in Europe, Africa and the Middle East.

Bad debt risk

With this very wide spread of markets, ECGD cover is vital. The company insures with ECGD against 90–95% losses through overseas buyers' default or insolvency, and sterling transfer and other political risks.

'It was an automatic decision to insure with ECGD,' says Mr J.H.B. 'Bad debts would soon slow our expansion.'

Sales take off

The company has expanded export sales rapidly, from £20,000 in 1968 to £200,000 this year, despite tariff barriers and import restrictions in many overseas markets.

Selling overseas is rarely easy. But it's made simpler and much less hazardous with ECGD insurance. Get the full story from your local ECGD Manager or write for the free comprehensive booklet to Information Section, ECGD, Aldermanbury House, Aldermanbury, London EC2.

Export Credits Guarantee Department:
London, Bedford, Belfast, Birmingham, Bedford, Bristol, Cardiff, Crawley, Edinburgh, Glasgow, Leeds, Liverpool, Manchester, Newcastle upon Tyne, Nottingham, Reading, Sheffield.

ECGD

Export with an easy mind

CRC 120

Trade and Industry

Incorporating the Board of Trade Journal and New Technology
Volume 5. No. 13. Pages 645 to 676. December 30, 1971. Price 10p. Net subscription, post inclusive, £7.60
Editorial address: Room 437, Department of Trade and Industry, 1 Victoria St., SW1H 0ET. 01-222 7877
Advertisements: HMSO, Room D94, Atlantic House, Holborn Viaduct, London EC1P 1BN. 01-248 9876 ext. 6147
Subscriptions: HMSO, PO Box 569, London, SE1. 01-928 6977 ext. 472

HOME NEWS AND FEATURES

647 Denmark: model farms and modern factories

650 Clearance of merger proposals by the DTI

650 Official appointments

651 New appointments to CoID

651 Visits by British overseas commercial representatives

651 HM Customs and Excise annual report

652 Notice to Importers: Milk products

652 Notice to Importers: Eastern Area—changes in import licensing arrangements

653 The Import Duties (Temporary Exemptions) (No. 9) Order 1971

653 Export office procedure courses in Scotland

653 Metal recovery project for Blaenavon promises 50 jobs for men

653 Another advance factory for Abercarn

653 Patents endorsed 'Licences of Right'

AVIATION AND SHIPPING

655 Appointments to the British Airways Board and to the boards of the Air Corporations

655 New convention on civil liability for damage to shipments of nuclear materials

656 POINTS FROM PARLIAMENT

659 GOVERNMENT SURPLUS SALES

STATISTICS

660 Index to statistics

New Technology pp. i–viii

661 The economy: selected indicators

662 National Food Survey: household food consumption in the third quarter of 1971

663 General index of retail prices for November

663 'Economic Progress Report' for January 1972

663 Registrations of British and foreign films

664 Hosiery and other knitted goods—index of production

664 Production in the cotton industry

665 Output of the wool textile industry

666 Release dates of economic statistics to be published in January 1972

666 Business Monitor

TRADE PROMOTION

667 MISSIONS AND TOURS

EXHIBITIONS AND FAIRS

668 Coastguards in old-time uniforms at Boat Show

668 Scientists from 50 countries for Oceanology 72

668 Success in Moscow for British firms

670 EXPORT ORDERS

TRADE INFORMATION

671 Kennedy Round tariff negotiations

672 Amendments to the EFTA convention consequential upon amendments to the Brussels Nomenclature. The EFTA (Origin of Goods) (Amendment) Regulations 1971. ECGD backs £4½ million contract for solvent extraction plant for Zambia. Lebanon and Saudi Arabia

TARIFF AND TRADE NOTICES

675 **Australia:** Tariff Board inquiry on commercial vehicles. Tariff Board inquiry on lightning arrestors. Result of Dumping Tariff Board inquiry on diacetone alcohol

675 **Chile:** Amendment to import tariff

672 **European Communities:** Common agricultural policy. UNCTAD generalised preferences system

676 **Guyana:** Introduction of Brussels Tariff Nomenclature

674 **Israel:** Tariff amendments. Plant protection regulations

675 **Laos:** Kip devaluation and new customs duties

674 **Morocco:** Import restrictions

675 **New Zealand:** Customs tariff

676 **Peru:** Prohibitions

673 **Portugal:** Drawback: Paper, paperboard and cardboard

674 **South Africa, Republic of:** Customs tariff application

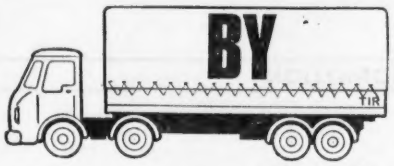
674 **Switzerland:** Amendment to customs tariff

674 **Uganda:** Import Prohibition (Revocation) Order

676 **United States:** Confectionery quotas. Vehicle safety. Economic measures

© Crown Copyright 1971
Short extracts can be published without specific permission providing that the source is duly acknowledged.
The views expressed in contributions to *Trade and Industry* emanating from other than official sources are not necessarily those of Her Majesty's Government.
The Government will accept no responsibility for any of the statements in the advertisements and the inclusion of any particular advertisement is no guarantee that the goods or the service advertised herein have official approval.

GENTRANSCO?



WE WISH A MOST

Successful New Year

TO ALL OUR CUSTOMERS

—and to all others who are not yet GENTRANSCO USERS, why not make sure that your New Year is successful by making use of the GENTRANSCO GROUPAGE SERVICES to and from the continent of Europe . . .

THROUGH:

HULL — LONDON — MANCHESTER

Your inquiries are welcomed by our

COMMERCIAL DEPARTMENT

GENTRANCO SERVICES LTD.

P.O. BOX 166, CENTRAL HOUSE,
STRATFORD, LONDON, E.15 2PT

Telephone: 01-534 6655 **Telex: 897153/4**

GENTRANSCO—ECONOMY AND EFFICIENCY.

BARCLAYS International

AND SUBSIDIARY COMPANIES

New Phase of Expansion and Opportunity

The following is an extract from the statement of the Chairman, Sir Frederic Seebohm, for the year ended 30th September, 1971.

On 1st October 1971, Barclays Bank DCO changed its name to Barclays Bank International Limited. This acknowledges a basic change of function and policy which has been taking place over the last five or six years at an accelerating pace.

In America we now have a flourishing bank in California. On the other side of the continent another subsidiary, Barclays Bank of New York, has been established. In Europe, with our parent we now have a controlling interest in Société Bancaire Barclays (Suisse) S.A. and have opened a second branch in West Germany, at Frankfurt, to supplement our business in Hamburg.

Local incorporations

Barclays National Bank Limited on 1st October took over our business in the Republic of South Africa and in South West Africa. The new bank has a paid up capital and reserves of R.83 million (£47 million). We have retained our business in Botswana, Lesotho and Swaziland as part of our own operations.

Other subsidiaries have been set up in Ghana, Sierra Leone and, from 1st October, Zambia. In Malawi we have joined together with the Standard Bank Limited to form, in partnership with the Government, the National Bank of Malawi. Similar arrangements are in hand for Kenya. In Israel we have come to an arrangement with the Discount Bank to incorporate a new bank which will amalgamate our local business and that of a subsidiary of theirs. We now have no fewer than fifteen subsidiary or associated banks in operation.

The change in name marks a far reaching re-organisation in the structure of the whole Barclays Group. The expansion that has taken place at home and overseas, not only in size but also in new activities, makes such re-organisation essential. The parts which concern us are first, that we have now become a wholly owned subsidiary of Barclays Bank Limited and, second, that Barclays Bank International will in 1972 take over from the parent the direction of the U.K. foreign branches, Barclays Bank S.A. (the French subsidiary) and some of its overseas trade investments. There will be many people who will be sad to say farewell to the well-known name of 'DCO'. I am sure, however, that the great majority will not only see the logic of the changes but welcome the challenge of new policies and wider horizons.

Continuing growth in business and profits

The Group profit for the year, before tax and excluding exceptional items, at £30,553,000 shows an increase of £5.4 million on the comparable figure for 1970. The net figure of £16.1 million (1970 £13 million) represents a working improvement of 23.8 per cent. There are in addition certain non-recurrent items which bring the total profit after tax to £17.5 million (1970 £14.5 million).

In May, Barclays Bank of Nigeria became the first of our subsidiaries to make a public issue; one million 10s. shares were offered to the public at 16s. 6d. a share and the issue was oversubscribed almost four times. This is the type of operation which we hope to repeat elsewhere when the time is appropriate, thus giving the local private sector the chance to invest in its own banking system.

In the international currency world our dollar operations have continued to develop. For some time we have felt that a purely sterling capital does not provide a satisfactory base for the expansion of international business and we have therefore raised $50 million, partly in 15-year 8¼ per cent bonds and partly in 7-year 7¾ per cent notes.

I have little doubt that, on balance, Great Britain should join the E.E.C. There are clearly great opportunities here for an international bank.

A farewell message

I wish to take this opportunity of thanking all those who have given me such strong support during my chairmanship.

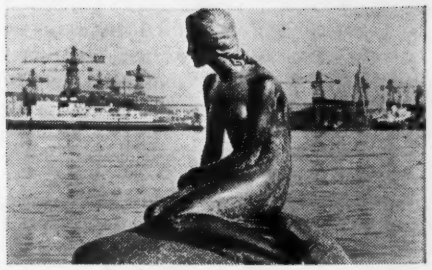
During the last few years we have introduced new methods of management, a process which could not have succeeded without the full co-operation of the staff at every level.

The Bank is now entering a new phase of expansion and I have no doubt that the opportunities for the staff are as great as they have ever been.

Copies of the full statement and the report of the directors can be obtained from the Secretary, Barclays Bank International Limited, 54 Lombard Street, London EC3P 3AH.

Denmark: model farms and modern factories

by G. W. Marshall, MBE, BEM,
Commercial Counsellor, British Embassy, Copenhagen



Art and industry; Copenhagen's famous little mermaid gazes on the Burmeister and Wain shipyard. The Danish shipbuilding industry provides an excellent market for British manufacturers of marine equipment.

Christmas is now over and British exporters will once again be taking stock of order books. One overseas market which could help fill those books is Denmark where a British Trade Drive is to be held from February to November 1972. The first part of this article (*Trade and Industry* of December 23) examined the development of Denmark from an economy dominated by agriculture to one in which the foreign exchange earnings of new industries are becoming increasingly important. The second part deals with the current situation and draws attention to some future trends.

The import surcharge

IN introducing the import surcharge on October 20, the Danish Prime Minister, Mr. Krag, said that this action was made necessary by the considerable balance of payments deficit. The large short term foreign debt, and the inadequacy of foreign reserves were a considerable threat to the economy especially in view of the current uncertainty surrounding the international money market.

There is no doubt that the economic ills the Prime Minister referred to existed in mid-October and continue today. But Denmark has had a balance of payments deficit for the last decade and still manages to enjoy an extremely high standard of living. They will not give this up lightly. While some redirection of demand is clearly the order of the day it is unlikely that there will be any dramatic interruption of the lines of supply. The Danish economic dilemma is that of a country with few raw materials wishing to change rapidly from an agricultural economy (efficient but with static earnings) to an industrial one. Remarkable success has been achieved and Denmark has a reputation for political and industrial stability. While the foreign exchange costs of imported raw materials and equipment have risen much faster than export earnings her record for meeting her obligations is impeccable.

The import surcharge has been announced as a temporary measure and is in fact to last no more than another 15 months. It will be levied at an initial rate of 10 per cent, reducing to 7 per cent on July 1, 1972 and to 4 per cent on January 1, 1973, before elimination on March 31, 1973. The exemptions from the charge, which cover about 50 per cent of Denmark's imports, include most raw materials and unprocessed food, some paper products (including newsprint), ships and aircraft, textiles for the clothing industry and some semi manufactures and components for the engineering and electrical industries.

The effects on the Trade Drive

The planning of a large scale promotion takes many months to complete. Next year's Trade Drive was first broached in 1969—a year when total Danish imports rose by nearly £240 million and when there was every indication that the high level of import demand would continue. The planners try to avoid staging a major export effort in a market when the economy is deliberately being depressed and it is disappointing that fortune has not favoured us to this extent in Denmark. It is not, however, more than a disappointment: the inhibiting surcharge is of a temporary nature and its bite will progressively diminish; on the other hand, the benefits expected of a major export effort are long term and there is a certain multiplier element in their effect.

Denmark is no stranger to British promotional efforts. There was one in 1964 and again in 1968. Each of the previous efforts has produced long term commercial benefits extending far beyond the immediate period of promotional activity. British exporters who appointed agents in 1964 continue to do good business and the 1972 Drive should produce similar results. Over a 10 month period a wide variety of British goods will be brought to the attention of Danish buyers; the effects of this can be expected to last beyond 1972 and, more importantly, beyond April 1973 when the surcharge is removed.

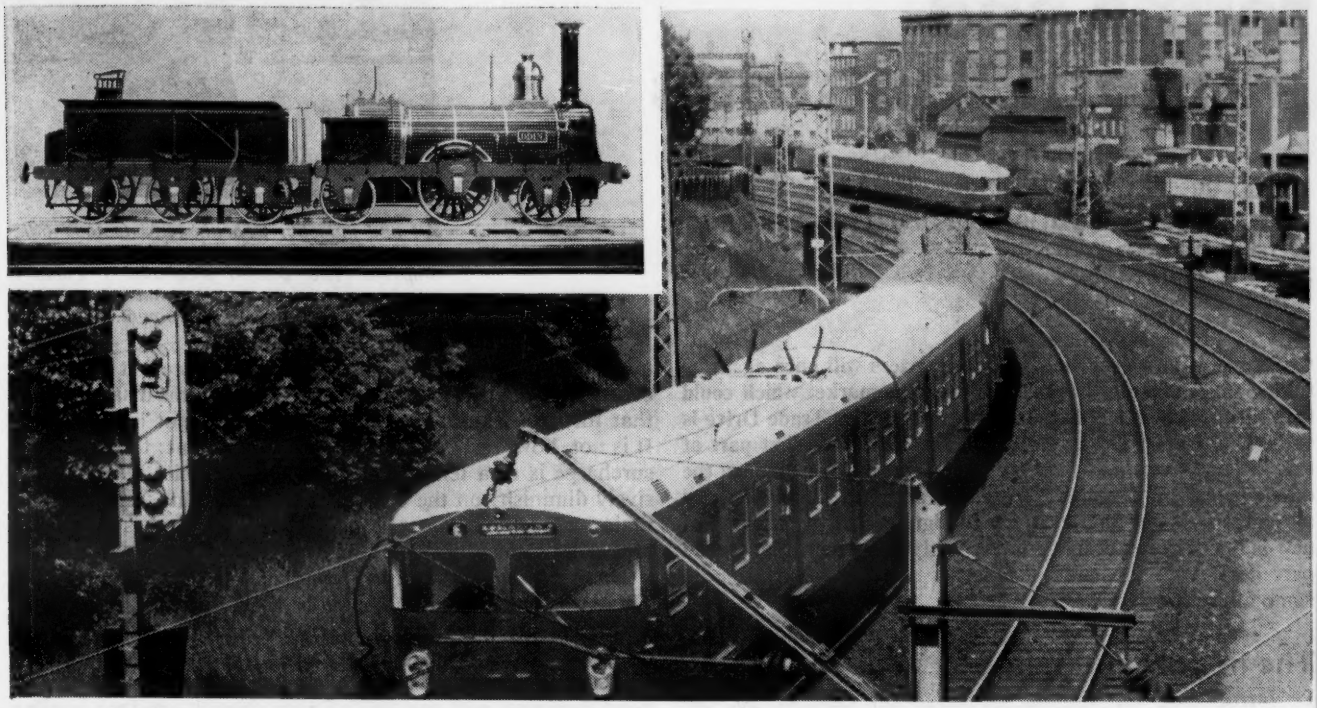
The promotion of capital goods where the benefits are particularly long term has always been a priority for the 1972 Trade Drive. Most of the capital goods events (see the table at the end of this article) will take place in the autumn of 1972 by which time the surcharge will have been reduced to 7 per cent. Many of the orders placed then will take time to process and when they are ready for delivery the surcharge will either be further reduced (to 4 per cent on January 1, 1973) or totally removed (March 31, 1973).

The position on consumer goods, which are a lesser but, nevertheless, important part of the drive, is not so clear cut. There is obviously going to be some 'holding off' until July 1, 1972 but our information is that stocks are low of items liable to the surcharge and that the Danes have over the last few years acquired a preference for imported goods which they will not easily give up. If this is true, the importers will not be able to hold off for very long. We may well, however, be forced to make some adjustments in this area and allow for a lower rate of extra buying than expected a few weeks ago. But we are heartened by the reactions of Danish importers of consumer goods who will be taking part in the Drive. These are all level-headed commercial men, but not one of them has wanted to withdraw.

There are three main reasons for deciding to follow the 1968 Trade Drive with another in Denmark in 1972. Firstly,

(*continued on next page*)

This article is one of a series dealing with aspects of overseas markets which are of continuing importance to Britain. The largest markets will be dealt with by more than one article. Future articles in this series will deal with the markets in Finland and Norway.



Britain built Denmark's first locomotive, Odin, which inaugurated the line from Copenhagen to Roskilde in 1847. Today Britain is still supplying Denmark with advanced railway equipment. These 1,500 volt d.c. multiple-unit trains used on Copenhagen suburban services are powered by English Electric-AEI traction equipment.

Speaking of the

1972 Trade Drive in Denmark

Have you already

★ **Made yourself familiar with market conditions here?**

★ **Planned your participation in exhibitions?**

★ **Prepared brochures, catalogues, photographs, Press releases?**

★ **Decided upon follow-up actions after the Trade Drive?**

If not, better contact us at once. We will see your marketing operation through from its very start — with accent on public relations that will make your products better known in this country. No product will "sell itself". Please write to Mr. J. Gram, MA, BSc (Econ), Principal,

J. G. PUBLIC RELATIONS

4 B Raadhusstraede, 1466 Copenhagen K, Denmark
Telephone: Copenhagen (01) 14 28 03
Night telephone: (01) 81 15 53

it is felt that British industry might welcome a reminder of the importance of this small but highly lucrative market. Secondly, 1972 will more than likely be the last year in which we shall enjoy full EFTA advantages in Denmark in competition with non-EFTA exporters especially the West Germans. This would therefore be a good time to try to increase Britain's share of the market at the expense of foreign competition. The third reason is that, at the time our Trade Drive was planned, the balance of trade in Denmark's favour was £55 million. In 1971 it is likely to be £70 million! None of these points has been invalidated by the surcharge. All suppliers to the Danish market will be affected by the impost and the terms of competition will be unchanged.

It is these considerations which persuaded the Embassy and the DTI to continue with the Trade Drive. This decision has subsequently been endorsed both by the British Import Union in Denmark and by industry in Britain.

Denmark and the EEC

Denmark's transition from agriculture to industry gained momentum in the 1960s through her membership of EFTA. The serious limitations on export of Danish agricultural products to Western Europe, and particularly West Germany, underlined the need to expand exports in other directions. The elimination of tariff barriers in EFTA generated a rapid growth of trade in industrial goods. This has been especially apparent among EFTA's Scandinavian members (intra Scandinavian trade rose about 350 per cent between 1960 and 1970) and Danish industry has developed in step.

Against this background (which was examined in greater detail last week), Denmark, like Britain, has applied for membership of the EEC. If her negotiations continue to go well, she can expect to join in January 1973. Progressively,

the markets of the EEC will become more easily accessible to Danish industrial goods; Danish agricultural earnings can be expected to rise, both from the higher produce prices obtaining in the EEC and from the larger potential market. At present about 64 per cent of Denmark's exports go to only five countries. Of these West Germany is a member of the EEC, Britain and Norway are fellow applicants and Sweden is negotiating for some form of industrial free trade arrangement with the enlarged Community; Denmark's other major customer is the USA. One would not therefore expect any substantial change in the direction of Denmark's exports after 1973. But EEC membership should bring increased export earnings which will further reduce the balance of payments deficit and provide good collateral for increased imports.

It is impossible to quantify the effects which these developments will have on Anglo-Danish trade. Throughout the period of EFTA, British goods have faced strong competition not only from Sweden but also from West Germany, Denmark's leading supplier. But with few exceptions Denmark is traditionally a low tariff country and the margin of EFTA advantage has always been either small or non-existent. Thus, the progressive removal of tariff barriers between Denmark and the countries of the EEC is unlikely to result in any great or sudden increase in the pressure of Britain's competitive position. Moreover export opportunities are likely to increase substantially. Assuming Danish industrialists accept the challenge of EEC in the same way that they responded to EFTA, one may expect the import demand for industrial raw materials, machinery and plant to develop strongly. Final figures for 1971 are likely to show that Danish imports rose only about 5 per cent above the 1970 level, but over the next year or two Danish manufacturers will need to replenish a major proportion of their industrial equipment to meet the increased competition of an enlarged European Community. The new Social Democratic Government has recognised this already and is setting up a Capital Market Board to advise on priorities for the provision of capital for industry and especially the export industries. There is also a possibility that more favourable tax allowances will be given to exporters soon and that depreciation allowances will be granted at an earlier stage to assist the re-tooling of factories. The agricultural industry demands new investment too and has for too long been denying itself essentials because of low returns. The signs here are, however, much clearer than in general industry. In last week's article mention was made of the importance which Danish farmers attach to their traditional outlet in Western Germany and to entry into the EEC. The farmers seem to be anticipating entry judging by the considerable increase in the number of loan applications currently before the Agricultural Credit Board and by the statistics of new farm machinery purchases. Thus the demand for essential equipment will persist, the finance will be made available, the opportunities for British exporters are clear.

Making the most of the market

On the eve of Trade Drive year, we in the British Embassy in Copenhagen look forward to an increase in the number of British business visitors to Denmark and the Commercial Department is ready to help whenever possible. However export opportunities in the Danish market are not limited to the commodities targetted in the Trade Drive. There are other possibilities worth exploring. I would not therefore wish to conclude this article without a brief reference to some of the developments which, in the future, may also help to fill British export order books:

* Denmark shares the international concern about environmental pollution. She acknowledges the need to channel extra investment into an intensive research effort.
* North Sea oil and natural gas will lead to development of the chemical industry and will greatly change the availability of power to industry generally.
* There will be major developments in transport and communications. A new international airport for Copenhagen, a bridge across the Great Belt, a fixed road/rail link across the Sound to Sweden, new motor ways between the principal cities and south to the new markets of Europe are among the projects receiving consideration.

British Trade Drive in Denmark 1972

Current Programme of Events

Date	Event
February 17-19	Scandinavian Menswear Fair, Bella Centre, Copenhagen
February 28-March 11	British Foodstuffs Promotion by Brde Justesen A/S
March 12-15	Scandinavian Fashion Week, Bella Centre, Copenhagen
April 16-22	Trade Mission from London Chamber of Commerce
May 1-10	British Foodstuffs and Household Goods Promotion by Salling/Fotex, Irma and Oceka
May 15-27	British Foodstuffs Promotion by Hoki A/S
May 1-14 (approx.)	British Hardware Promotion by Difa, Imerco, S Kjersgaard & Co.
May 1- closing date not yet fixed	British Carpets Promotion by Jensen Carpets
May 1-12	British Toys Promotion by B. R. Legetoj and G. K. Legetoj
May 1- closing date not yet fixed	Departmental Store Promotions by Magasin du Nord, Daells Varehus and C Schous Fabriker A/S
May 1-10	Promotion of British Consumer Goods by Wefa A/S
May 1-13	Promotions in shopping centres and by selected speciality shops in Copenhagen, Slagelse, Odense, Aarhus and Aalborg
May 2-9	All British Household Goods Exhibition at the Forum Exhibition Centre, Copenhagen; sponsored by several British trade associations
May 14-20	Trade Mission from Scottish Export Committee
May 2-5	Seminar and Exhibition on Engineering, sponsored by the Engineering Industries Association
June 11-17	Trade Mission from Birmingham Chamber of Commerce
June 19-23	8th International Congress on Clinical Chemistry, at the Bella Centre, Copenhagen
July 5-8	Herning Agricultural Show
August	British Foodstuffs Promotion by the Favor Chain Stores
September 17-20	Scandinavian Fashion Week, Bella Centre, Copenhagen
September 30-October 6	Elektronik '72 and associated seminar, Bella Centre, Copenhagen
During second week of October	'Invisibles' Seminar, Hotel d'Angleterre, Copenhagen, organised by the British Import Union
October 16-21	British Shoe Week, sponsored by the British Footwear Manufacturers Association
October 16-21	British Wool Cloth Week, sponsored by the National Wool Textile Export Corporation
October 16-18	Forum/Seminar on Equipment for Shipbuilding, Scanticon near Aarhus, sponsored by the British Marine Equipment Council and Lloyds Register of Shipping
October 31-November 5	Intertool '72, Bella Centre, Copenhagen

Full details of the above events and other aspects of the Trade Drive are available from the Department of Trade and Industry, Fairs and Promotions Branch, Hillgate House, 26 Old Bailey, London EC4M 7HU; Tel: 01-248 5757, ext. 7207. Contact: Mr. B. Poole.

Clearance of merger proposals by the DTI

THE Department of Trade and Industry announce that on the information at present before them it is not their intention to refer to the Monopolies Commission, under the provisions of the Monopolies and Mergers Act 1965, the proposed merger between the following companies:

Sears Holdings Ltd. and William Hill Organisation Ltd.

Official appointments

THE Secretary of State for Trade and Industry has authorised the following appointments:

Alderman A. Ramsden, of Dewsbury; and Councillor Mrs. L. Walker, of Hull, to be members of the North Eastern Gas Consultative Council.

New member for Industrial Estates Corporations

THE Secretary of State for Trade and Industry has appointed Mr. D. H. Davies to be a member of the English Industrial Estates Corporation. Mr. Davies is general secretary of the Iron and Steel Trades Confederation.

Deputy Director at the National Physical Laboratory

THE Superintendent of the Division of Numerical Analysis and Computing, Dr. E. T. Goodwin, has been appointed a Deputy Director at the National Physical Laboratory. He will have executive responsibility for the Engineering Sciences Group, which comprises those Divisions at NPL which are concerned with the hydrodynamics of ships and other marine vehicles and their operational characteristics, with computing and computer applications, with engineering fluid dynamics and with acoustics. The Group gives particular attention to the interests and need of users, though it is also available to serve the manufacturer directly.

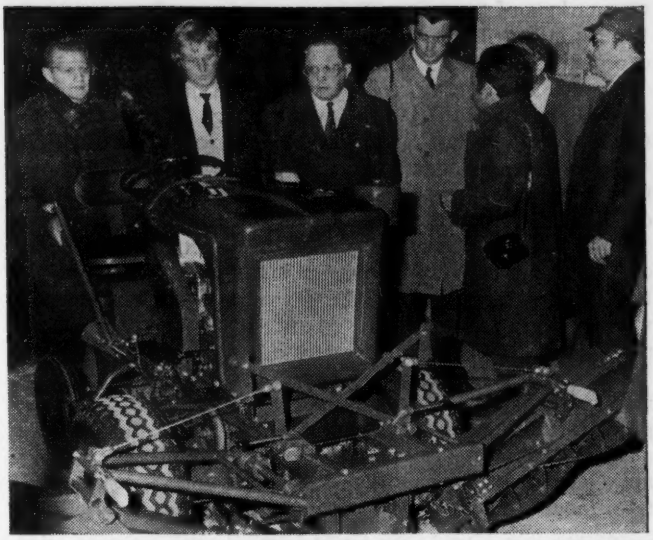
Reorganisation of HM Inspectorate of Mines and Quarries

Mr. B. J. Burkle, HM Principal Electrical Inspector of Mines and Quarries, will retire from the Public Service on January 2, 1972. Mr. Burkle has served in this post since March 1968 and originally joined HM Inspectorate of Mines and Quarries in March 1949.

Mr. S. Luxmore, Deputy Principal Electrical Inspector of Mines and Quarries, has been appointed Principal Electrical Inspector of Mines and Quarries with effect from January 3, 1972. Mr. Luxmore is a Chartered Engineer, a Member of the Institution of Electrical Engineers and of the Association of Mining Electrical and Mechanical Engineers. He joined HM Inspectorate of Mines and Quarries in 1952.

THE BBC EXPORT PROMOTION SERVICE

The primary aim of the BBC Export Promotion Service is to report Britain's progress as an industrial and trading nation and thus help to promote a favourable climate for exports. Every day the BBC tells the world about British business, industry, finance, technology, agriculture and science. It reports British achievements, progress and know-how, using the expert knowledge of its specialist reporters. Products and manufactures are named in these industrial broadcasts and inquiries resulting are passed on to manufacturers. The BBC broadcasts overseas in English and 39 other languages. Manufacturers who have an interesting story about British inventions, new products, unusual or striking export achievements, participation in overseas fairs, visits abroad, etc., are invited to contact the BBC. Telephone the Export Liaison Manager, BBC External Services, at 01-240 3456, Ext. 2393/2039 or write; Export Liaison Manager, BBC External Services, Bush House, London, WC2B 4PH.



Some of a party of 36 French officials representing parks and sports grounds throughout France, who were guests recently of Ransomes Sims and Jefferies Ltd. and their distributors for France, Maison Henri Perrier. During their stay the visitors saw the new grass machinery works at Ransomes Ipswich factory complex, and a demonstration of the company's products. Exports account for more than one-third of Ransomes grass machinery sales of over £3 million. The EEC is one of the company's largest overseas markets.

On January 1, 1972 the Eastern Division and certain Districts of HM Inspectorate of Mines and Quarries will be reorganised and the Divisional Office at Nottingham and the District Offices in Nottingham, Walkden, Exeter and Ashford (Kent) will be closed. Mr. G. D. E. Rowland, HM Divisional Inspector of Mines and Quarries, Eastern Division will take up post as Principal Inspector of Mines and Quarries at the London Headquarters of the Inspectorate and the following Districts will be added to those already reporting direct to headquarters:

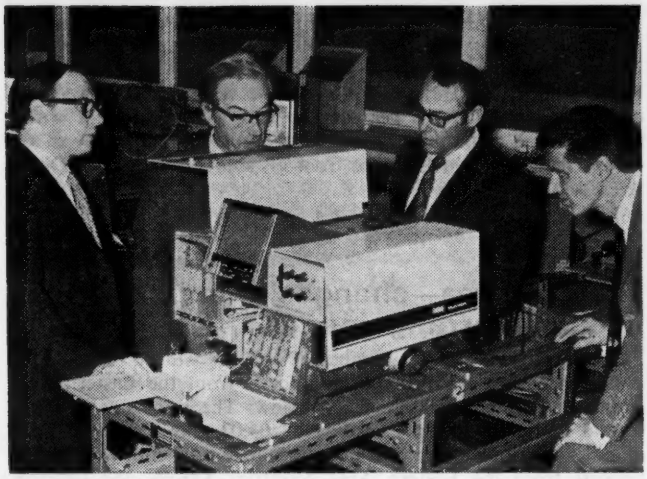
District	Senior District Inspector-in-charge
North Midlands Comprising the existing North Nottinghamshire and North Derbyshire District	D. Richards, Esq. 10-12 Bridge Street Worksop, Notts Worksop 3830 (STD Code 0909)
South Midlands Comprising the South Nottinghamshire District and the larger part of the Leicester District	F. Tootle, Esq. Granville House Granville Road Leicester LE1 7RW Leicester 20217 (STD Code 0533)
West Midlands and North Western Comprising the existing Staffordshire and Lancashire Districts	E. J. Raine, Esq. St. George's Chambers Merrial Street Newcastle under Lyme Staffs Newcastle 67906 (STD Code 0782)
Southern Comprising the existing South of England and West of England Districts and parts of Leicester and East Wales Districts	J. D. Tankard, Esq. East Wing Forbury House The Forbury Reading RG1 3ET Berks Reading 50417 (STD Code 0734)

The undermentioned changes in Division and District names will also take place on January 1, 1972:

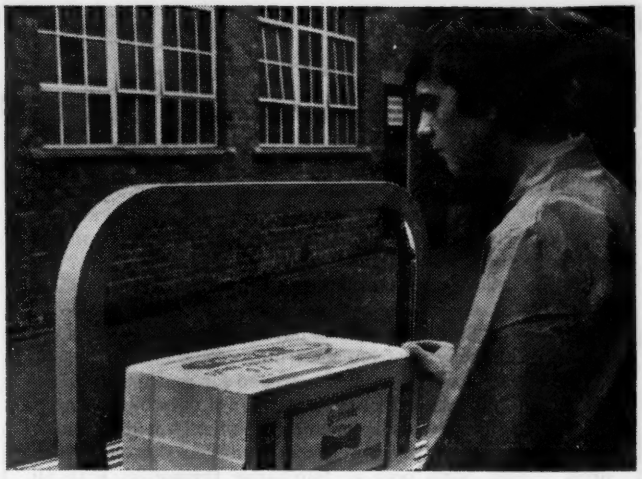
North Eastern and Western Division will become Yorkshire Division.

Northumberland District will become the Northern District.

Durham District will become Durham and North Riding District.



At EMI Electronics' Hayes plant, Belgian television engineers carry out acceptance tests on an EMI '2005' colour television camera being supplied to Belgian Radio Television (BRT) under a £200,000 contract. Won by the company's Television Equipment Division, the order is for the conversion of one of BRT's television studios in Brussels to colour working, and includes the first export sales of the new three-tube '2005' camera. Four camera channels and the new EMI '7000' series of video switching equipment are included in the contract.



A carton of agricultural baler twine for export to North America is strapped by British Ropes' Bandamatic automatic strapping machine. This order is the latest of a series of similar orders received by the company's Sunderland factory, all of which were shipped on palletised loads. This machine uses 'Starstrap' polypropylene strapping and can apply up to 15 straps per minute. The Bandamatic automatic strapping machine and the 'Starstrap' polypropylene strapping are products of British Ropes' Fibres and Plastics Division at Teams, Gateshead.

New Deputy Secretaries in the DTI

MR. John Davies, Secretary of State for Trade and Industry, has, with the approval of the Prime Minister, appointed Mr. Peter S. Preston and Mr. John G. Liverman to be Deputy Secretaries in the Department of Trade and Industry. Mr. Preston's appointment is in the Department's Trade Group, where he will fill a vacancy caused by the retirement of Mr. W. Hughes. Mr. Liverman's appointment is to an additional post in the Industry Group. The appointments will be effective from January 3, 1972.

New appointments to CoID

FIFTEEN new members have been appointed to the Council of Industrial Design by the Secretary of State for Trade and Industry and eight existing members have been reappointed. Sir Duncan Oppenheim remains chairman of the council.

The new members are: Mr. Campbell Adamson, director general, CBI; Prof. Asa Briggs, vice-chancellor, University of Sussex; Mr. David Carter, design consultant; Mr. Hugh G. Conway, engineer; Dr. Arthur F. Earle, principal, London Graduate School of Business Studies; Mr. Victor Feather, general secretary, Trades Union Congress; Mrs. Jennifer Jenkins, chairman, Consumers' Association; Mr. P. T. Lewis, deputy chairman, John Lewis Partnership; Sir Arnold Lindley, chairman, Engineering Industry Training Board; Mr. Ewen McEwen, vice-chairman, Joseph Lucas Ltd.; Mr. K. M. D. Mills, chairman, Allied English Potteries Ltd.; Mr. L. G. Oxford, chairman, Fram Filters Ltd.; Miss Mary Quant, director, Mary Quant Ltd.; Sir Frederic Seebohm, chairman, Barclays Bank DCO; Mr. Huw P. Wheldon, managing director, BBC Television.

Members reappointed

Lady Casson, senior lecturer, School of Interior Design, Royal College of Art; Mr. G. B. R. Feilden, director general, British Standards Institution; Mr. John Barclay Jacobs, managing director, Times Furnishing Co. Ltd.; Mr. T. Mervyn Jones, chairman, Wales Tourist Office; Mr. D. C. Lamont, director, Samuel Lamont & Sons Ltd.; Mr. Martin Moss, managing director, Simpson (Piccadilly) Ltd.; Dr. Alexander Moulton, managing director, Moulton Developments Ltd.; Mr. Matthew J. G. Wylie, chairman and managing director, Matthew Wylie & Co. Ltd.

Life member

Sir Gordon Russell, chairman, Gordon Russell Ltd.

Visits by British overseas commercial representatives

THE following Commercial Diplomatic Officer is expected to be in this country shortly, when he will be available for discussion.

KOREA: P. J. George, First Secretary (Commercial) in Seoul since February 1971.
Available: March.

British firms and organisations, other than those in the areas covered by the Department of Trade and Industry offices for the Eastern Region and the London and South Eastern Region, who wish to meet this officer to discuss specific export problems are asked to write for an appointment to the appropriate Department of Trade and Industry Regional Director (Exports) stating the nature of the problem and commodities involved. (The Department's Regional Offices together with the areas covered and the appropriate office for Northern Ireland were listed on page xlviii of the supplement to *Trade and Industry* of October 21, 1971.) Those firms and organisations in the London-based Regions mentioned above (together with those in other Regions who would prefer, or who would be prepared if necessary, to meet the officer for an interview in London) should write to Tours Section, Department of Trade and Industry, Room G60, Export House, 50 Ludgate Hill, London EC4M 7HU.

Because visiting officers often have only limited time at their disposal it may not always be possible to arrange an interview. Where it is not possible, firms are reminded that the Export Services Division of the Department of Trade and Industry, Export House, 50 Ludgate Hill, London EC4M 7HU, who are in close touch with all overseas representatives can very often supply advice, or the information that applicants hoped to obtain at the interview. Outside London the Regional Offices of the Department of Trade and Industry or, in Northern Ireland, the Ministry of Commerce, Belfast, can also supply this help.

HM Customs and Excise annual report

THE annual report of the Commissioners of HM Customs and Excise for the financial year ended March 31, 1971 was published on December 15 (HMSO Cmd 4826) price £1.10.

Total Customs and Excise net receipts for the year, excluding import deposits, were £5,139 million representing about 36 per cent of the yield of Central Government taxation. Net repayments of import deposits amounted to £424 million. Leaving aside import deposits the net receipts increased £374 million (7.8 per cent) over the previous year.

The cost of Customs and Excise administration was slightly over £45 million representing 0.88p for every £1 of the net revenue excluding import deposits.

Britain and the EEC

Collected edition of *Trade and Industry* articles available free from DTI

IN just over 12 months Britain is expected to be a full member of the EEC. Already many firms are actively preparing to take full advantage of the new opportunities and to meet the new challenge which entry will bring. Many others, especially small and medium sized firms, are only now beginning to consider what membership will mean to them. Some perhaps—especially those not involved in exporting—may even feel that Brtain's entry will have little direct impact upon them. This is very far from the truth.

Membership will have important and far-reaching implications for the whole of British industry, not only in the export field but also in day-to-day operations in the United Kingdom market. It is extremely important, therefore, that all British firms should begin now to familiarise themselves with all those aspects of the EEC—institutions, legislation, trading practices, tariff changes—which will make up the Community environment in which they will be functioning from 1973 onwards.

For many businessmen, with little time to spare, the problem will be where to begin—how to select from a bewildering mass of publications the material that will give them the basic information they need. A good way to start would be to read the series of articles *Britain and the EEC* which has been appearing in *Trade and Industry* over the last six months. Eleven of these articles are now available in a collected edition and can be obtained free of charge from DTI's EEC/EFTA Information Unit.

The series includes background articles on the Treaty of Rome, the European Coal, Steel and Atomic Energy Communities, Community law and regional policy. Practical information, of direct interest to businessmen, is contained in articles dealing with transport, industrial and commercial policy and the free movement of labour. One particularly important article—*Fair Competition in the Community*—deals with Community policy on matters most likely to affect businessmen such as restrictive trade practices. monopolies and mergers. Another useful article provides a guide to the advice and information available from DTI.

Further articles in the *Britain and the EEC* series will continue to appear from time to time in *Trade and Industry*.

The complete list of titles in the collected edition is as follows:

The Treaty of Rome: an outline of its principal provisions.
The European Coal, Steel and Atomic Energy Communities.
The scope and form of Community Law.
Industrial policy and the Community.
The EEC and the free movement of labour.
Common Market transport policy.
Technology and the Community.
Common commercial policy of the EEC.
Fair competition in the Community.
Regional policy and the Community: the Community's concern with regional problems.
Information and advice on the EEC available from the Department of Trade and Industry.

Copies of the publication and of individual articles can be obtained free of charge from the EEC/EFTA Information Unit, DTI, 1 Victoria Street, London SW1H 0ET. Tel: 01-222 7877 Ext. 3579 or 2479.

NOTICES TO IMPORTERS:

Milk products

FROM January 1, 1972, milk, preserved, concentrated or sweetened containing less than 50 per cent by weight of butter fat within tariff heading 04.02 may be imported under the authority of the Open General Import Licence from all sources except the Dollar Area.

Eastern Area—changes in import licensing arrangements

FROM January 1, 1972, a number of changes will be made in the import licensing arrangements for goods from the Eastern Area countries. The changes are listed below. The information in the second entry under tariff heading ex 04.02 about milk products modifies the notice 'Removal of quantitative restrictions on certain imports from the Eastern Area countries' (*Trade and Industry*, December 16, page 545).

Removal of quantitative restrictions

From January 1, 1972, the following items at present subject to quantitative restriction may be imported into the United Kingdom from the Eastern Area under the authority of the Open General Import Licence (OGIL):

Tariff heading	Description
02.02	Dead poultry and edible offals thereof, fresh, chilled or frozen. See Note below
ex 04.01	Cream, fresh, not concentrated or sweetened
ex 04.02	Cream, preserved, concentrated or sweetened
ex 04.02	Milk, preserved, concentrated or sweetened containing less than 50 per cent by weight of butter fat
ex 04.04	Cheese; curd containing less than 50 per cent by weight of butter fat (including hydrogenated butter fat and other chemically or physically modified butter fat)
ex 17.02	Lactose
ex 17.05	Lactose, flavoured or coloured
ex 62.01	Blankets, electric, wholly or mainly of woven cotton, of man-made fibres, of wool or of fine animal hair

Note: Imports are subject to compliance with the Poultry Carcasses Landing Order 1971

Transfer of certain items from open Individual Licence to Open General Import Licence

From January 1, 1972 articles of apparel and clothing accessories of leather or of composition leather *other than gloves* originating in or consigned from Eastern Area countries may be imported into the United Kindom under the authority of the OGIL. *All gloves within tariff heading 42.03 remain subject to quantitative restriction.*

Watch and clock repair parts within tariff heading 91.11 which have hitherto been imported into the United Kingdom under open individual licence from certain Eastern Area countries may be imported into the United Kingdom under the authority of the OGIL from January 1, 1972.

Grass seed

From January 1, 1972 quantitative restrictions on the importation of grass seed into the United Kingdom from Eastern Area countries will be removed. The importation of grass seed from these countries will remain subject to qualitative control and individual import licences will be required. Applications on form ILB/A should be completed in full and sent direct to the Ministry of Agriculture, Fisheries and Food (Seeds Branch), 83/91 Victoria Street, London SW1.

ELEPHANTIDE *for all Oil Immersed Electrical Apparatus, such as*
TRANSFORMERS, SWITCHGEAR etc. Also PRESS PAPERS FOR CLOTH FINISHING
B.S. & W. WHITELEY LIMITED
Pool-in-Wharfedale, Yorkshire. Telephone: Arthington 2121. Telex 55103

The Import Duties (Temporary Exemptions) (No. 9) Order 1971

THE Treasury has made the Import Duties (Temporary Exemptions) (No. 9) Order 1971.

This order provides that the goods listed in Schedule 1 shall continue to be exempt from import duty until January 1, 1973 except for items for which an earlier day is specified. The order also continues the partial exemption for photographic film base of cellulose acetate.

The order comes into operation on January 1, 1972 and has been published as Statutory Instrument, 1971, No. 2010. Copies of the order are available from Her Majesty's Stationery Office, 49 High Holborn, London, W.C.1 and branches (price 24p) or by post from HMSO, PO Box 569, London, S.E.1 (price 26½p).

Export office procedure courses in Scotland

IN view of the successful introduction in Scotland last year of export office procedure courses, the Department of Employment's Scottish headquarters in Edinburgh has arranged an increased number of courses for the first half of 1972.

The courses, which last five days, are non-residential, although the Department can assist in arranging hotel accommodation, particularly in the case of courses at Hillington Government Training Centre, Glasgow. The fee for each course is £28.

An experimental course in Scotland was held in June 1970, and 13 courses in 1971 had a total attendance of 163. Two courses at centres other than Hillington were held during the year—at Dundee and Edinburgh—and in view of the particular success of the Edinburgh course, the extension of the programme to regional centres is to continue next year, Edinburgh, Kirkcaldy and Aberdeen having been selected.

Particulars of the courses for the first six months of 1972 are as follows:

January 17-21	Glasgow	Hillington Government Training Centre
February 14-18	Glasgow	Hillington
March 6-10	Edinburgh	Venue to be decided
March 20-24	Glasgow	Hillington
April 10-14	Kirkcaldy	Town House
April 17-21	Glasgow	Hillington
May 1-5	Aberdeen	Greyfriars House, Gallowgate
May 15-19	Glasgow	Hillington
June 12-16	Glasgow	Hillington

Inquiries for the Scottish courses should be made to Mr. I. McLaren, Department of Employment, Stuart House, Semple Street, Edinburgh EH3 8YX (031-299 2433, Ext. 383).

Before the courses began in Scotland, Scottish students attended the regular export office procedure courses at the Government Training Centre, Letchworth. A series of regional courses is planned for England in the early part of 1972, details of which were given in *Trade and Industry*, dated November 18, 1971, page 349.

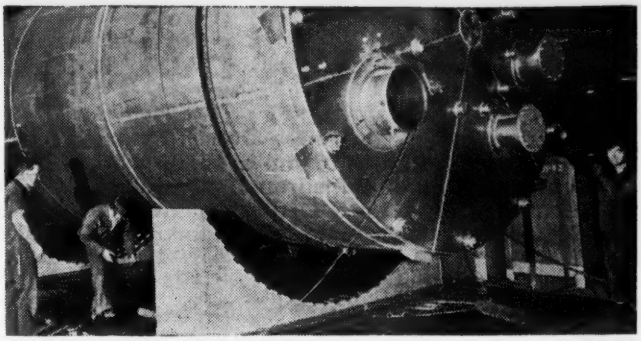
Metal recovery project for Blaenavon promises 50 jobs for men

THE pithead baths of the former Kay Slope Colliery at Blaenavon, Mon., are to be taken over by the Brookside Metal Co. Ltd.

The company are members of the BICC group and have their head office at Watford with other units at Willenhall and Linlithgow, Scotland, where they are engaged on the recovery of non-ferrous metals from scrap and waste materials and on cable-coating. They employ some 400 people on these activities and propose to establish a further unit in South Wales to serve Wales and the South West of England.

Negotiations have now been completed for the purchase of the colliery baths together with adjoining land from the Blaenavon Urban District Council who had acquired the site with a view to attracting industry to the area. The company will undertake extensive adaptations to the baths to convert them to industrial use and they have applied to the Department of Trade and Industry for a building grant to defray part of the expenditure involved.

When the project is fully operational some 50 men will be employed and there are prospects of further expansion of the labour force in due course.



At the Bilston works of E. C. Payter & Co. (Alcan Booth group) this 5,500 cu. ft. polythene blending tank for Procon (G.B.) Ltd. will be shipped to South Korea where it will form part of a new chemical complex for the Korean Pacific Chemical Corporation. This and other work by Payter for the Korean plant is valued at over £100,000.

Another advance factory for Abercarn

THE Department of Trade and Industry are to build another Special Development Area advance factory at Croespenmaen in the Abercarn UDC area. The factory, which will be of 25,000 sq. ft., will be reserved for a firm offering employment for a predominantly male labour force. The factory will be built by the Welsh Industrial Estates Corporation on behalf of the Department of Trade and Industry, on a site of 5½ acres at the Abercarn Urban District Council's Croespenmaen Industrial Estate. This group site, strategically situated within reasonable distance of the M4 motorway and the Heads of the Valleys road, is expected to be of particular interest to firms requiring quick and easy access to markets in the Home Counties and the Midlands. Building work on the advance factory is expected to commence in the spring of next year and the factory is expected to be ready for occupation before the end of the year.

The new factory is being undertaken in accordance with the arrangements for the Special Development Areas, which include a higher rate of inducements including a five-year rent-free period for a suitable project, and which provide for the replacement of advance factories which have attracted tenants. The Abercarn project follows the letting of similar factories elsewhere in the Special Development Area.

Patents endorsed 'Licences of Right'

UNDER Section 35 of the Patents Act, 1949 the following patents were endorsed 'Licences of Right' on the dates specified.

Number	Grantee	Subject-matter
December 2, 1971		
939,676	William Charles Markham	Suspension filing devices
1,120,926	Brown, Boveri and Company Ltd.	Heat sink for semi-conductor elements
1,121,518	Brown, Boveri and Company Ltd.	Apparatus for measuring the slip of asynchronous machines
1,190,447	Maurice Bourget, Andre Gesnel and Joseph Orard	Plants and method for permitting transplanting of plants out of season, in particular rose-trees and shrubs
1,191,148	Riv-S K F Officine de Viller Perosa SpA	Protective element for hearings

Any person who claims that the patentee at the time of endorsement of any of the above patents was precluded by a contract in which claimant is interested from granting licences under the patents may apply for cancellation of the endorsement on Patents Form No. 45 within two months after the date of endorsement.

E. ARMITAGE
Comptroller

Addresses of ECGD Local Offices

The Export Credits Guarantee Department (ECGD) is a Government Department providing export credit insurance for United Kingdom exporters. Its object is to provide on a self-supporting basis, the cheapest form of export credit insurance possible. Total business declared for the Financial Year 1970-71 was £3,225 million. The Head Office of ECGD is at Aldermanbury House, Aldermanbury, London, EC2P 2EL. Tel. 606 6699, Telex 883601. The Department's local offices are as follows:

London (City)
London postal districts E., and E.C.2 and 3, and the county of Essex.
J. V. Baker, Marlon House, 71-74 Mark Lane, London EC3R 7HS. Tel. 488 3491. (Code: 01-488 3491) Telex 886888.

London (South)
London postal districts of E.C.4, S.E.1-27 and S.W.1-20. Counties of Kent and Surrey (Greater London Council Area only).
G. J. A. Link, First Floor, Lancaster House, 70 Newington Causeway, SE1 6EG. Tel. 407 5011. (Code: 01-407 5011) Telex 888575.

London (North)
London postal districts of N., E.C.1, W.C.1 and 2, County of Hertford and Middlesex (part GLC area only).
D. A. Green, 1-4 Old North Street, Red Lion Square, WC1R 4TE. Tel. 405 8991. (Code: 01-405 8991) Telex 2633615.

London (West End)
London postal district N.W. and W. Middlesex (part GLC area only).
D. G. Hake, Waverley House, 7-12 Noel Street, London, W1V 3PB. Tel. 1-437 2292. Telex 24105.

Bedford
Counties of Bedford, Cambridge, Huntingdon, Norfolk, Suffolk and Northamptonshire.
M. J. Crane, Heron House, 49-51 Goldington Road, Bedford. Tel. Bedford 58798 (Code: 0234 58798) Telex 82350.

Belfast
The six counties of Northern Ireland.
R. H. Forsyth, River House, High Street, Belfast, BT1 2BE Tel: Belfast 31743/4 (Code: 0232 31743/4) Telex 74577

Birmingham
Counties of Shropshire, Hereford, Worcester, Warwick, Merioneth, Montgomery, Radnor and Stafford.
B. T. Clark, Chamber of Commerce House, Harborne Road, Birmingham B15 3DL Tel. Edgbaston 4375. (Code: 021-454 4375) Telex 33132.

Bradford
The West and North West of the West Riding of Yorkshire (excluding Barnsley, Harrogate, Otley, Pudsey, Ripon, Wakefield and Yeadon).
F. Wilmot, West Riding House, Cheapside, Bradford, BD1 4LG. Tel. Bradford 25147. (Code: 0274 25147) Telex 51161.

Bristol
Counties of Gloucester East of the Severn, Wiltshire, Dorset, Somerset, Devon, Cornwall and the Channel Islands.
W. D. Begg, Washington House, Great George Street, Bristol, BS1 5QL. Tel. Bristol 22102. (Code: 0272 22102) Telex 44248.

Cardiff
Gloucester West of the Severn, Cardigan, Brecon, Pembroke, Carmarthen, Glamorgan and Monmouth.
G. H. Turl, St. David's House, Wood Street, Cardiff, CF1 1ES. Tel. 26657. (Code: 0222 26657) Telex 49284.

Crawley
Counties of Surrey (excluding area covered by GLC) and Sussex.
F. R. Burge, Barden House, 36 Spencers Road, West Green, Crawley, Sussex. Tel. 23444. (Code: 0293 23444) Telex 87374.

Edinburgh
The counties of Angus, Berwick, Clackmannan, Dumfries, Fife, Kinross, the Lothians, Peebles, Roxburgh and Selkirk.
J. S. Anderson, 108 George Street, Edinburgh, EH2 4LN. Tel. Caledonian 3004. (Code: 031-225 3004) Telex 72170.

Glasgow
The counties of Aberdeen, Argyll, Ayr, Banff, Bute, Caithness, Dunbarton, Inverness, Kincardine, Kirkcudbright, Lanark, Moray, Nairn, Perth, Renfrew, Ross and Cromarty, Stirling, Sutherland, Wigtown and the Orkneys, Shetlands, Western Isles and Hebrides.
R. H. K. Hughes, 7 West George Street, Glasgow, G2 1BL. Tel. Central 3056. (Code: 041-221 3056) Telex 77130.

Leeds
The East and North Riding of Yorkshire (excluding the area North of a line from Yarm to Staithes). The East and North of the West Riding of Yorkshire (including Goole, Harrogate, Otley, Pudsey, Ripon, Wakefield and Yeadon).
W. A. Luxton, Headrow House, 42 The Headrow, Leeds, LS1 8HD. Tel: Leeds 30082. (Code: 0532 30082) Telex 55232.

Liverpool
The Welsh counties of Anglesey, Caernarvon, Denbigh and Flint: parts of Lancashire and Cheshire and the Isle of Man.
J. M. Foster, Number One Old Hall Street, Liverpool, L3 9HJ. Tel. Central 5756. (Code: 051-236 5756) Telex 62537.

Manchester
Parts of Lancashire and Cheshire and parts of Derbyshire.
W. Ford, Cheshire House, 18-20 Booth Street, Manchester, M2 4AJ. Tel. Central 8861. (Code: 061-236 8861) Telex 667756.

Newcastle upon Tyne
Counties of Northumberland, Durham, Westmorland and Cumberland; part of North Riding of Yorkshire, including Middlesbrough, Redcar and Thornaby-on-Tees.
R. A. Bounds, 2 Osbourne Road, Newcastle upon Tyne, NE2 2BL. Tel. Newcastle 814214. (Code: 0632 814214) Telex 53305.

Nottingham
Counties of Leicester and Rutland, and parts of the counties of Nottingham, Derby and Lincoln.
A. E. Beedle, Equitable House, Old Market Square, Nottingham, NG1 2LE. Tel. 46585. (Code: 0602 46585) Telex 37566.

Reading
Counties of Berks, Bucks, Hants, Oxford and West Middlesex.
K. I. Humphrey, 18 The Forbury, Reading, RG1 3EJ. Tel. Reading 580577. (Code: 0734 580577) Telex 84422.

Sheffield
The Southern triangle of the West Riding of Yorkshire (including Barnsley), and parts of the counties of Nottingham, Derby and Lincoln.
W. K. A. Oxley, 8-12 Furnival Gate, Sheffield, S1 4QN. Tel. Sheffield 29151. (Code: 0742 29151) Telex 54244.

New York
In the United States exporters can obtain assistance from the Department's resident representative for the United States and Canada.
J. A. Dorrian, DFM, 150 East 58th Street, New York, 10022, USA. Tel. 593 2258. Telex 420543.

AVIATION and SHIPPING

Appointments to the British Airways Board and to the boards of the Air Corporations

THE Secretary of State for Trade and Industry, Mr. John Davies, announced in answer to a Parliamentary Question on December 21 that, with effect from that day, he had appointed the following as members of the British Airways Board:

Members who are full-time within the group; Mr. Derek H. Glover, Mr. Keith Granville, Mr. Henry Ernest Marking, Mr. John Ross Stainton, Mr. Kenneth Grahame Wilkinson; **part-time members,** Professor Sir Ronald Edwards, Sir Kenneth Keith, Sir Arthur Norman and Mr. Peter Parker.

Mr. Granville and Mr. Marking remain chairmen of British Overseas Airways Corporation and British European Airways respectively. Sir Arthur Norman and Sir Kenneth Keith, on their appointment to the Airways Board, are resigning their positions as board members and deputy chairman of BOAC and BEA. The Secretary of State has appointed Mr. Stainton and Mr. Wilkinson as deputy chairmen of BOAC and BEA. Mr. Glover is assuming the full-time role of group financial director and is resigning from the board of BOAC.

In order to maintain the strength of the air corporation boards, the Secretary of State has appointed Captain Frank W. Walton and Mr. Richard M. Hilary as full-time members of the board of the British Overseas Airways Corporation; and Mr. Ronald A. Spencer and Mr. Ronald E. Leach as full-time members of British European Airways.

The appointment of Mr. David Nicolson as chairman of the Airways Board was announced by the Secretary of State on October 7, 1971. Under the Civil Aviation Act, there has to be between eight and 15 members of the board, inclusive of the chairman and the two chairmen of BEA and BOAC. Further appointments, up to a maximum of five, can therefore be made at a subsequent date.

Notes

The British Airways Board is being set up under the Civil Aviation Act 1971. Its purpose is to exercise strategic control over BEA and BOAC and their subsidiaries as a group so as to develop their services and resources to the best advantage. BEA and BOAC will remain the operating airlines, but the British Airways Board is to consider how far and how fast integration between the two airlines should go and make recommendations to the Government.

An Order will be published later fixing the date from which the Airways Board will take full responsibility for the public sector airlines. Meanwhile preparatory work is going on. It is understood that on Monday, January 3, 1972 the Board will move into its new offices at Air Terminal Victoria, Buckingham Palace Road, London SW1W 9SR (Tel: 01-828 6822); and that Mr. Nicolson plans to hold the first full meeting of the board on January 10.

The creation of an Airways Board was recommended by the Edwards Committee which reported in 1969. The previous Government in their White Paper on Civil Aviation (Cmnd. 4213) in November 1969 accepted the recommendation and legislation was introduced by the present Government and became law in August this year.

Part of Britain's biggest airlift of day-old broiler breeding chicks which left Gatwick recently for Chile. Ross Poultry say that when reared to maturity these birds are expected to produce approximately 10 million commercial broilers representing, at an average weight of 4 lb. 17,850 tons of poultry meat.

New convention on civil liability for damage to shipments of nuclear materials

THE United Kingdom, with other maritime States, has signed a new convention intended to remove from the carrier any residual liability for accidental nuclear damage arising from the sea transport of nuclear material, such as irradiated nuclear fuel. There is no change in the existing international conventions, to which the UK is already a party, by which the liability for such damage falls upon the operator of the nuclear installation for whom the material is being carried. He has to maintain a guaranteed financial security of at least £2,100,000 against claims.

Notes

The purpose of removing the residual liability from the carrier for a risk which is already fully covered by the absolute liability and guaranteed security of the operator is to reduce uncertainty about the liability and thus make it easier for shippers to accept consignments of nuclear material without the provision of special indemnities over and above commercial insurance and the security of the operator. There is no special risk in transporting nuclear substances when properly packed in accordance with the internationally agreed regulations which are strictly enforced. The convention is intended to remove a legal anomaly which has hindered the necessary international movements of nuclear material, eg in the growing business of re-processing spent nuclear fuel, of which the UK already has a substantial share.

The convention, signed on December 18, was negotiated at Brussels earlier this month between the States who are members of the International Maritime Consultative Organisation (IMCO) a United Nations Agency. The Convention will come into force following ratification by five signatory states.

UK BUSINESSMEN GOING OVERSEAS

British businessmen intending to travel overseas are urged in their own interests to make the earliest possible contact, before going abroad, with the Export Services Division of the Department of Trade and Industry (DTI) at either the Regional Office covering their area or Export House, 50 Ludgate Hill, London EC4M 7HU. The DTI in co-operation with Commercial Officers at Embassies, High Commissions and Consulates overseas, is in a position to provide advice when it is required, and to arrange for suitable introductions and contacts related to the purpose of their business. Apart from the businessman's name and his firm's, DTI needs to know the general purpose of the visit: details of his itinerary—places to be visited and dates as nearly as possible: names and addresses of local agents: type of contacts and introductions the businessman would like arranged in advance: and any other information considered helpful. This information should, where possible, be accompanied by appropriate trade literature.

POINTS from PARLIAMENT

Supplementary questions and answers on the points in these pages are published in *Hansard*

Trade and industry

THURSDAY, DECEMBER 16

Motor insurance companies

Mr. Nicholas Ridley, Parliamentary Under-Secretary of State for Industry was asked to list those motor insurance companies which had gone into liquidation for the period January 1960 to December 1971, on what dates, together with the number of policyholders involved in each case. Giving the following list, Mr. Ridley said that the number of policyholders was not recorded, but the total for the companies listed was estimated at about two million.

MOTOR INSURANCE COMPANIES WHICH FAILED BETWEEN 1.1.60 and 15.12.71

	Date of order
Brandaris Insurance Co. Ltd.	23.10.61
First General Assurance and Guarantee Co. Ltd.	15. 7.63
American Military (International) Insurance Association	29. 7.63
Fire Auto and Marine Insurance Co. Ltd.	25. 7.66
Coventry Insurance Co. Ltd.	5.10.66
London and Cheshire Insurance Co. Ltd.	30. 1.67
London and Midland Insurance Co. Ltd.	20. 2.67
Irish American Insurance Co. Ltd.	30. 3.67
Gibraltar Insurance Co. Ltd.	30. 5.67
South Yorkshire Insurance Co. Ltd.	20. 7.67
London and Home Counties Insurance Co. Ltd.	6. 9.67
London and Wessex Insurance Co. Ltd.	6. 9.67
Metropolitan and Northern Counties Insurance Co. Ltd.	6. 9.67
Craven Insurance Co. Ltd.	27. 5.68
Industrial Life and General Insurance Co. Ltd.	2. 7.68
Carriage Insurance Co. Ltd.	6. 7.70
Midland Northern and Scottish Insurance Co. Ltd.	6.12.70
Vehicle and General Insurance Co. Ltd. and four subsidiaries	22. 3.71
Automobile and General Insurance Co. Ltd.	
General and Commercial Motor Guarantee Co. Ltd.	
Metropolitan General Insurance Co. Ltd.	
Transport Indemnity Insurance Co. Ltd.	
Competitive Insurance Company Ltd.	22. 6.71

GATT

Mr. Anthony Grant, Parliamentary Under-Secretary of State for Trade, was asked to state the names of the countries which combined with India, the United Arab Republic and Yugoslavia in submitting a preferential trade treaty to the General Agreement on Tariffs and Trade for approval on November 17 last; and whether approval had been given. Mr. Grant said 'The other countries are Brazil, Chile, Greece, Israel, Korea, Mexico, Pakistan, Peru, the Philippines, Spain, Tunisia, Turkey and Uruguay. The Contracting Parties to GATT decided on November 26 to allow the participating countries to exchange certain tariff concessions.'

Industrial development certificates

Mr. Grant told a Member who asked if he would keep separate figures of industrial development certificates granted and refused to small firms, as defined in the Bolton Reports, that he would bear the suggestion in mind.

Industrial development

A Member asked a question on the number of schemes for major investment involving construction enlargement or re-equipment of industrial premises for the DTI which were under consideration by the Secretary of State; what was the total value of such schemes at present held up owing to procedures relating to planning permissions; and in view of the employment opportunities consequent on these buildings, what steps were being taken to eliminate unnecessary delays. Mr. Grant replied 'The Department's industrial premises are those provided under the Local Employment Acts. Schemes considered for individual premises are normally relatively small and none are held up for planning permission'. Mr. Grant was also asked to what extent the availability and attractions of the empty government-built factory in Penygroes, Caernarvonshire, were brought to the attention of potential tenants by the regional offices of his department; and to what extent the assistance of the Welsh Development Corporation was sought for this purpose. He said 'The Regional Offices of the Department lose no opportunity of bringing details of vacant government-owned factories in the assisted areas to the attention of suitable industrialists. The Development Corporation for Wales is notified of all such vacant factory space in the Principality and has published details of the Penygroes factory in *Progress Wales*.'

THURSDAY, DECEMBER 16

Labelling of imported textiles

The following question was asked: 'Whether, with regard to the textile industries, the expiry of the requirement of labelling foreign origin textiles (so easily victims of low wage cost imports) does not in effect export to such countries the benefits of the Chancellor's recent employment incentives; whether it is not a fact that established representative consumer bodies regard such labelling as desirable in the interests of consumers; and whether they (HM Government) will now take appropriate steps to re-impose previous marking requirements.'

Lord Drumalbyn, Minister without Portfolio, replied: 'Consumer opinion is divided on the merits of origin marking of imported textiles, but the Government are not satisfied that quality or other characteristics can reliably be deducted from origin. The Private Member's Bill which has been introduced in another place is intended to deal with fears that foreign goods bearing United Kingdom names or trade marks might mislead shoppers into believing that the goods were made in the United Kingdom. The Government have said that they will support the Bill.'

MONDAY, DECEMBER 20

Govan Shipbuilders Ltd.

Mr. John Davies, Secretary of State for Trade and Industry, was asked to make a statement on the advice being offered by the Department of Trade and Industry to Govan Shipbuilders regarding the appointment of the new chairman of the company. Mr. Davies replied that he had discussed with the board of the company the names of people who might be invited by the board to become chairman of the company.

In answer to a request for a further statement on the position of shipbuilding in Upper Clydeside, Mr. Davies said: 'The establishment, through Govan Shipbuilders Ltd., of a viable merchant shipbuilding undertaking remains the Government's aim. Studies which I have commissioned from consultants into the conditions for setting up such an undertaking covering the Govan, Linthouse and possibly Scotstoun yards are continuing and I hope to have the results early in the New Year. I will take them into account in the proposals which I expect Govan Shipbuilders Ltd. to put to me. The study I have commissioned into the future potential of Clydebank should also be completed in the New Year.'

Shipbuilding subsidies

In answer to a question on the approved policy put forward by the DTI to the Organisation for Economic Co-operation and Development regarding shipbuilding subsidies, Sir John Eden, Minister for Industry, said that the Government's policy was to support efforts within OECD to reach international agreement on proposals for a progressive reduction of all forms of Government assistance to the industry which would distort competition.

Trade with Israel

A Member inquired what was the latest annual rate of imports from and exports to Israel; how these figures compared with a year earlier; and for the longest stated period of time, what had been the annual balance of trade between the two countries. Mr. Grant, replying, said that imports and exports in January to November, 1971, at an annual rate were £53 million and £114 million respectively compared with £45 million and £96 million in 1970. Figures for the trade balance were not available for individual countries. Figures of imports cif and exports fob were published, but the difference between them was not a good measure of the visible trade balance because, inter alia, of the difference in the bases of valuation.

Ferro-alloys

A Member asked what consultations the Secretary of State had had with the producers of ferro-alloys before he made the Import Duties (Developing Countries) Order, Statutory Instrument No. 1882; and if he was aware of the difficulties that it will cause such producers. Mr. Grant replied that industry generally had been kept informed about the scheme during the last three years, while the details were being worked out. Detailed consultations on specific products would not have been appropriate since the Government's offer had to be considered on a broad basis, having regard to the offers of other countries. If any serious difficulties arose, industry could have recourse to the safeguard arrangements described by the Minister for Trade in the House on December 8 during the debate on the Order.

Lime oil

An estimate was asked for of the effect on the lime growers of Jamaica, Trinidad and Dominica of the inclusion of lime oil in the Import Duties (Developing Countries) Order 1971 (SI 1971, No. 1882). Mr. Grant answered that he could not assess in advance how their trade to the United Kingdom might be affected, but lime oil was also to be admitted duty free into other markets.

Cynheidre Colliery accident

Sir John Eden was asked what action would be taken in respect of the recommendations contained in the report of the inspection into the Cynheidre Colliery accident. He answered that a full meeting of the enlarged Joint Committee on Outbursts of Coal and Firedamp would take place early in the New Year to discuss the recommendations. Informal discussions had been in progress for some time.

Power stations

In reply to a Member who asked when an announcement would be made about the construction of a new coal-fired power station, Sir John Eden said that it was primarily for the CEGB to determine the proposed construction dates for particular power stations. The board reviewed the situation annually in the light of updated estimates of electricity demand six winters ahead and its estimates of future relative fuel prices and generating costs. More questions were put on the use of coal by power stations. Mr. Ridley was asked if the Secretary of State would introduce a new fuel policy making the maximum use of oil and gas from the North Sea and home-produced coal, and replied that the fuel oil duty already gave a measure of preference to other indigenous fuels, but use of fuels depended on their respective prices. The Secretary of State continued to review all aspects of fuel use.

Asked why the new power station recently announced would use oil and not indigenous coal, Mr. Ridley said that in the CEGB's view, the proposed power station, Ince B, which was specifically designed to burn oil, offered advantages in costs, design and location which made it at present the preferred station for advancement within the overall context of the CEGB's system and possible additions to it. It was also the station which could most readily fulfil the Government's objective of stimulating the economy thus reducing unemployment.

Mr. Ridley was also asked if a general direction would be issued to the Central Electricity Generating Board to allocate at least half of its future building programme to coal-fired stations, thus helping to maintain employment in the coal-mining industry. He answered: No. A policy having no regard to relative fuel price estimates would be inappropriate. In 1970/71 coal accounted for 71.5 per cent of the primary fuel used by the CEGB and the Board will need considerable quantities of coal for as far ahead as can be foreseen.'

Imports of coal

Several questions were asked regarding imported coal. Sir John Eden was asked what recent consultations he had had with the National Coal Board regarding imported coal. Sir John Eden said that the Board had given him their views which he would take into account in the review of coal imports' policy.

Mr. Ridley was asked to what extent the European Coal and Steel Treaty would affect the Secretary of State's intention to review coal imports before March 1972; what estimate he had made of the future need for the import of special coals; and if he would list their types. He said that the need to ensure supplies of special coals would be taken into account in the review of coal imports policy, on which an announcement would be made not later than March. The timing of the review would not be affected by our membership of the Community, but no restrictions would be imposed on Community coal.

Mr. Ridley was also asked what notice would be given to coal importers that when the ban on coal imports was imposed no more coal would be allowed to enter the country after the stated date and no compensation would be paid for frustrated coal imports, and what estimate had been made of the extent to which there was stockpiling of contracted imports of coal in Rotterdam and Amsterdam; what stocking charges were being imposed upon the initial contract prices; and whether these coals would be allowed to be imported into Great Britain after the coal import ban had been re-imposed. He answered: 'I do not propose to prejudge the decision on the future of coal imports policy, but importers should not assume that, if restrictions are imposed, existing contracts would be exempted. The terms of contracts are a matter for the importers.'

A Member who asked how many coal miners' jobs had been lost as a result of the contracted coal imports of three million tons by the Central Electricity Generating Board and how many coal mines had been prematurely closed, was told that no coal mines had been closed prematurely or coal miners' jobs lost as a result of coal imports. The imports of coal by the Central Electricity Generating Board insured supplies for coal-burning power stations last winter.

Monopolies Commission

In answer to a question, Mr. Ridley said that the size of the staff of the Monopolies Commission was 64, including four part time staff, on December 1, 1971 and 41, including six part time staff, on December 1, 1970.

Industrial development certificates

Mr. Grant was asked what would be the effect upon the present policy for the issue of industrial development certificates of Great Britain joining the European Economic Community. He replied that he knew of no reason why the idc system should not continue, after entry, to play an important part in persuading industry to consider locations in the assisted areas.

Industrial development

Mr. Grant answered questions on industrial development in the Northern Region, Hartlepool, Houghton-le-Spring, Carfin Industrial Estate, Pontardarwe, Gorseinon and Mexborough.

New employment from idc's

A Member asked what was the aggregate number of new jobs estimated to arise from the issue of industrial development certificates in each planning region in June 1970 and in June 1971; and what was the estimated figure at the latest available date. The following information was given by Mr. Grant.

ADDITIONAL EMPLOYMENT RESULTING FROM IDCS APPROVED* FOR SCHEMES OF 10,000 SQ. FT. AND OVER

	1.6.70–30.6.70		1.6.71–30.6.71		1.11.71–30.11.71	
Region	Males	Total	Males	Total	Males	Total
North	2,650	4,080	420	540	40	80
Yorks & Humberside	620	850	50	80	150	230
East Midlands	580	1,030	50	50	360	440
East Anglia	120	320	160	220	140	200
South East	1,510	2,380	820	1,100	1,220	1,680
South West	730	870	400	640	520	790
Wales	1,540	1,670	140	240	120	190
West Midlands	280	400	260	450	290	390
North West	820	1,260	1,090	1,250	240	350
Scotland	150	250	980	1,540	310	520

* Applicants' estimate of the additional employment expected to arise when the projects are complete and fully manned.

Contracts preference scheme

Mr. Grant was asked on how many occasions since June 1970 the contracts preference scheme had operated to the advantage of firms in the development areas; what was the total value of the contracts; and which areas benefited. He answered that from the formation of the Department in October 1970 until November 30, 1971, 228 contracts valued at £168,099, were placed with firms in Development Areas. Without undue expenditure it was not possible to say which were placed under the provisions of the Contracts Preference Scheme. The following was the information:

CONTRACTS PLACED IN DEVELOPMENT AREAS BETWEEN OCTOBER 1, 1970 AND NOVEMBER 30, 1971

Development Area	No. of contracts	Value (£)
Northern	40	4,142
Merseyside	103	132,054
South West	2	2,771
Scotland	63	16,646
Wales	17	8,336
Northern Ireland	3	4,150
Totals	228	168,099

Imports of Japanese wool

In answer to a question on the quotas for imported Japanese wool cloth for each of the last eight years; and how much of these were taken up in each year, Mr. Grant said that these quotas were administered by the Japanese Government through the issues of export certificates. The following was the information available to date.

	Quota ('000 sq. yds.)	Export certificates issued ('000 sq. yds.)
1963	400	8
1964	500	89
1965	600	22
1966	600	56
1967	800	106
1968	1,000	71
1969	1,200	56
1970	1,440	not yet available

Hall-marking

Answering a question on the compulsory assay and hall-marking of valuable metals, Mr. Ridley said: 'We are now considering how a reformed compulsory hall-marking system could best be administered and enforced, and hope to publish a consultative document at some time in the future.'

TUESDAY, DECEMBER 21

The Companies Act

Mr. Ridley was asked to give, for the longest most convenient stated period of time, the number of convictions obtained by the DTI for contravention of Section 126 of the Companies Act 1948; and what penalty was imposed in each instance. He answered: 'Most of this information is already available in the Companies General Annual Report. The labour of compiling details of individual penalties would not be justified, but the average penalty imposed is of the order of £10 per default'. In reply to a Member who asked whether the investigations which he conducted into complaints of negligence made to him in relation to any of his department, including those concerning the enforcement of the Companies Act, included the interviewing and taking of verbal statements from the complainants, Mr. Davies said: 'The form of any investigation would depend on the nature of the complaint. An interview is not excluded.'

Leather goods

A Member asked what representations had been received since the Import Duties (Developing Countries) Order 1971 was passed drawing the Secretary of State's attention to hitherto unrealised problems which the Government's decision to give tariff preferences to under developed countries supplying leather goods and footwear would cause to the tanning and leather

(continued on next page)

POINTS FROM PARLIAMENT
continued

manufacturers in the United Kingdom, Mr. Grant said: 'I have received various representations. As my right hon. Friend the Minister for Trade made clear to the House on December 8, adequate safeguard arrangements are available if the preferences cause or threaten serious injury to domestic producers.'

EEC regulations affecting engineering

Mr. Ridley was asked what consultations he was having with professional engineering bodies about those European Economic Community regulations and directives which directly affected the engineering profession, Mr. Ridley said that the EEC had agreed on arrangements for consulting us, before our full membership, about Community policies. He continued: 'We expect to receive draft subordinate legislation which will concern the engineering profession in the near future, and, when we do, we shall consult the professional engineering bodies concerned.'

NIFES

Asked to make a statement on the future of the National Industrial Fuel Efficiency Service, Sir John Eden said: 'Negotiations are well under way towards achieving the Government's intention that the services now provided by NIFES shall continue to be available on a commercial basis after March 31, 1972 without further Government financial assistance.'

Aviation and shipping

WEDNESDAY, DECEMBER 15

North Sea: geological information

Lord Drumalbyn was asked whether the Government would insert into the new North Sea oil and gas drilling licences a provision for the geological information acquired by the licensee to be made public after five years, as was already the case in the Norwegian and Danish sectors of the North Sea.

He replied that a five-year period was already specified. The Petroleum (Production) Regulations 1966, as modified by amending Regulations made in May 1971, allowed detailed geological information to be made public after five years from the end of the initial licence period and after a five-year interval subsequently. Disclosure of general geological information might be made three years earlier.

THURSDAY, DECEMBER 16

Air fares

In reply to a request for a Government statement concerning the introduction of cheaper air fares in Europe, and for more details on the new package of North Atlantic fares, ratification of which was still under discussion in Geneva, Lord Drumalbyn said: 'The IATA negotiations on European air fares have ended without an agreement, due largely to BEA's insistence on special low fares on certain routes. We are awaiting full reports from the United Kingdom airlines concerned, and shall discuss the position with them. The negotiations on North Atlantic fares have now been concluded. The agreement reached is much along the lines of those laid down by the airline chairmen and presidents in Honolulu last month, except that all fares have been increased by 4 dollars for each round trip to cover the costs of international route charges which some Governments began to levy on November 1, 1971. The agreement also includes reductions in normal economy fares at certain times of the year, and reductions in some individual excursion fares and in affinity group and inclusive tour group fares during the year.'

Stansted and Southend airports

Asked when, if at all, the airfields at Stansted and Southend would have to be closed as a result of the Foulness Airport project, Lord Drumalbyn said that neither Stansted nor Southend Airport was likely to remain in use for public transport aircraft for long once the third London Airport was open. So far as air safety considerations was concerned, both airfields could still be used for private flying, at least in the early years of Foulness operations.

MONDAY, DECEMBER 20

Shipping industry

Sir John Eden, when asked if he was satisfied with the research and development relating to the shipping industry being conducted within his responsibility, said: 'Yes, Sir; I am satisfied that there is an effective research and development programme in relation to the needs of this industry, but this is kept under continuous review.'

Civil Aviation Authority

Mr. Davies was asked if the Civil Aviation Authority Board would include an airline pilot as a member. He replied that he was still considering the composition of the Authority, and hoped to announce the initial appointments shortly.

Smoke suppressors on jet aircraft

Mr. Frederick Corfield, Minister for Aerospace, was asked what steps he had taken to study the results of the retrofitting of engine smoke suppressors on civil jet aircraft in the United States of America. He said: 'My Department is well aware of the American work. The techniques they have employed in reducing smoke formation in one of their types of civil engine are already well understood by the National Gas Turbine Establishment and by industry.'

Concorde

Answering questions on the price of Concorde, Mr. Corfield said: 'At our meeting on December 7, M. Chamant and I agreed on the pricing formula to be adopted by the manufacturers in their negotiations with the first three option holding airlines. We agreed not to reveal this formula in order not to prejudice the outcome of the negotiations. I have not yet been able to ascertain precisely what transpired but I will inform the House at the first opportunity.'

Answering questions on the noise produced by Concorde aircraft, Mr. Corfield said that the manufacturers estimated that the noise levels of Concorde on entry into service would compare as follows (figures in EPNDb on the basis of the requirements of ICAO Annex 16):

	Lateral noise on take-off	Flyover noise after take-off	Approach noise on landing	total
Boeing 707-320C	108	114	120	342
VC10	113	110	115	338
Boeing 747-100	102	115	113	330
Boeing 747-200B	98	108	109	315
Concorde	111	114	115	340

The figures for the Boeing 747 were, respectively, for the aircraft on initial entry into service (747-100) and estimates for the latest version, the -200B with new air inlet, which was now going into production. Mr. Corfield said, in reply to another question, 'The design aim is that Concorde's noise should be comparable to that of existing jet aircraft, and on this basis it should be able to meet airport noise standards.' Asked about aircraft performance and maintenance guarantees to prospective customers, Mr. Corfield said that the manufacturers were currently in discussion with airlines about their requirements and the guarantees necessary to negotiate sales contracts.

He told a Member who asked about the total labour force employed on the Concorde directly and indirectly, respectively, that approximately 26,000 people were at present directly dependent on the Concorde project. It was estimated that about 10,000 of these were direct workers, and 16,000 indirect.

RB211

A Member asked if the negotiations of the RB211 contract by HM Government included any obligation for orders to be placed by Great Britain for products of the United States aircraft industry. Mr. Corfield replied: 'No such obligation was sought or accepted in the Government's discussions with the US Government or the negotiations with Lockheed.'

TUESDAY, DECEMBER 21

Allegations of bribery

Mr. Davies was asked why it had taken nearly five months to investigate the allegations of bribing of civil servants within his department concerning affinity group charter flights; what outside investigators were called in to aid his inquiries; and whether they had yet reported. Mr. Davies replied: 'This matter was referred to the Director of Public Prosecutions in September this year and he arranged for inquiries to be made by the Metropolitan Police. I am informed that the inquiries have now been completed and that the Police Report is in the hands of the Director who has advised that the persons who are said to have made allegations of bribery have denied doing so and that there is no evidence whatsoever to suggest that such allegations are true.'

Concorde

Mr. Corfield, asked to ensure that the Concorde would never fly commercially over Cornwall, said: 'The Government has powers under the Civil Aviation Act to regulate or prohibit commercial supersonic flying over the United Kingdom, and is at present considering how these powers should be exercised. A decision will be announced in good time before Concorde enters service.'

Civil Aviation Authority

Answering a question on appointments to the Civil Aviation Authority, Mr. Davies said: 'I hope to announce some initial appointments shortly. I intend that when all the appointments are made the Authority will contain a spread of experience from within and without civil aviation.'

Advertising in *Trade and Industry*

Inquiries about advertising in *Trade and Industry* should be addressed to HMSO, Room D92, Atlantic House, Holborn Viaduct, London EC1P 1BN (01-248 9876 ext 6147).

Government surplus sales

MINISTRY OF DEFENCE

January 6, 1972 Miscellaneous Stores

Location: Memorial Hall (entrance through Central Hall), High Street, Chatham

Auctioneers: Fuller Horsey Sons & Cassell (Dept. L), 52 Bow Lane, London EC4M 9ET. (Tel. 01-248 7954)

3-ton and 10-ton rollers; 30 ft. × 9 ft. steel welded fuel tanks; 5 KVA generating sets, electrical equipment including, oscillators; oscillographs; power units; electric motors; voltmeters; test sets; signal generators, etc.; tyres; machine tools; vehicle spares; many items of furniture including, tables; dressing chests; various types of chairs; cabinets; cupboards; kitchen equipment; boots; shirts; jerseys; skirts; battle dress trousers and blouses and many items of other general stores.

January 12/13 Miscellaneous stores

Location: Regional Depot, RAOC, Hereford.

Auctioneers: Russell Baldwin & Bright (Dept L), 20 King Street, Hereford. (Tel. 0432 4366)

2-ton trucks; electronic valves; electronic and electrical spares; large quantities of spares for concrete mixers; refrigerators; heavy duty vehicles; clothing; textiles; furniture; charging sets and numerous other miscellaneous stores; machine tools including lathes; grinding and milling machines; electric drills; electric sanders; portable electric saws, etc.

January 19/20 Miscellaneous vehicles and plant

Location: Ordnance Storage and Disposal Depot, Ruddington, Notts.

Auctioneers: Walker, Walton & Hanson (Dept. L), Byard Lane, Bridlesmith Gate, Nottingham NG1 2GL. (Tel. 0602 54272)

Commercial vehicles including light and heavy trucks, tractors, fork lifts; Leylands and Matadors; Dukws; Pantechnicon trailers with winch and air conditioning; various other trailers; cars; light vans; motor cycles; and 27½ KVA generating sets.

Catalogue for the above sales are obtainable from the relevant auctioneers about two weeks prior to and up to the date of the sale, price 10p (postal order only).

Sales by Tender: Machine Tools

Horizontal borers; bench drills; surface tool grinders; capstan and centre lathes; horizontal vertical universal millers; shaping, sawing; sheetmetal working and woodworking machines, etc.

Location: Rosyth & Bandeath, Scotland.

Tender must be returned by 10 a.m., January 25, 1972.

Sales by Tender: Press

Taylor & Challen 2,000 tons capacity 8-in. stroke verticle blanking press, weighing approximately 130 tons.

Location: Britley, Co. Durham.

Tender must be returned by 10 a.m., February 23, 1972.

Permission to view on presentation of tender forms only, obtainable from:

Directorate of Sales Supply 6a(iv)
First Avenue House
High Holborn
London WC1 6HE.

DEPARTMENT OF THE ENVIRONMENT

January 4, 1972

Location: Department of the Environment Supplies Division Stores, India Pavilion, Exhibition Grounds, Wembley, Middlesex. (Tel. 01-902 4482)

Auctioneers: Messrs. Fuller Horsey, Sons and Cassell, 10 Lloyds Avenue, Fenchurch Street, London EC3N 3BJ. (Tel. 01-709 0101)

Office and miscellaneous furniture, engineering, electrical, canteen, domestic and other equipment, etc.

Catalogues: price 5p direct from auctioneer.

View days: day preceding and morning of sale.

Customs notices of interest to exporters

THE following Public Notices issued by HM Customs and Excise relate to various aspects of export procedure. Copies of these Notices may be obtained from the local Officer of Customs and Excise, whose address appears in the telephone directory and to whom all inquiries should be addressed, or from the Secretary, HM Customs and Excise, 39-41 Mark Lane, London, EC3R 7HE.

General Notice	
49	Temporary importations: international co-operation.
77E	Purchase tax-exports.
77X	Purchase tax—retail export schemes.
104	Temporary importations and exportations under ATA and ECS Carnets.
112	Authorised hours for Customs work at ports, airports and in long rooms and charges for attendance given at the request of merchants.
118	Samples required for the purpose of promoting exports from the United Kingdom: admission without payment of Customs duty and purchase tax.
206	Export trade reliefs: temporary importation for process or repair.
207	Reimported goods: relief from Customs duty and purchase tax.
210	Temporary importation of films and similar goods for copying, printing, etc., to fulfil export orders.
215	Relief from Customs duty and purchase tax on importations of goods intended for export which are not otherwise eligible for relief.
275	Documentation of Exports for Statistical Purposes
290	Export of personal and household effects.
300	Export reliefs scheduling scheme.
467	The New Customs Tariff and Overseas Trade Classification
Exchange Control	Notice to Exporters. Issue dated September 1970. (Issued by HM Treasury—also obtained from any bank.)

Drawback	
7	Drawback on mixed or blended beers when exported or deposited in bonded warehouse.
77M	British-made cars and motorcycles; tax free sales to tourists, etc.
132	Sugar: all matters relating to the importation, warehousing and export of sugar and sugar goods, and to the use of surcharge-free sugar for certain purposes.
172	Hydrocarbon oils: drawback of duty.
218	The conditions and procedures under which drawback of import duty may be claimed on goods which are exported in the same state as they were in when imported.
219	The conditions and procedures under which drawback of import duty may be claimed upon the exportation of goods produced or manufactured in this country from imported materials.
224	The examination of bottled beer, exported on drawback, at the premises of a licensed brewer for sale, or beer dealer, as an alternative to examination on the quay.
291	Claims for drawback on goods exported where there has been a variation in the duty rate.
372	Notice to exporters and other traders regarding goods exported, shipped as stores or deposited in bonded warehouse on drawback; authorisation of signatories to drawback claims.
430	Tables of rates of sugar surcharge, distribution payments and corresponding repayments.
430A	Table of rates of sugar surcharge and distribution payment on imported invert sugar and other imported goods containing sugar and repayment rates of exported invert sugar and exported beer.

STATISTICS

Index to statistics and organisational information published regularly in TRADE and INDUSTRY

A = annually; M = monthly; Q = quarterly; 6M = every six months.

All dates before October 21, 1970, refer to articles in the *Board of Trade Journal*.

Title	Last published
Air transport:	
Aircraft noise at Heathrow and Gatwick airports (Q)	Dec. 2, 1971
Air miss reports (A)	April 1, 1970
Mileage and traffic (A)	April 29, 1970
Trade by air (6M)	Oct. 21, 1971
Balance of payments:	
Civil aviation (Q)	Oct. 28, 1970
Trends in invisible transactions (Q)	Dec. 16, 1971
UK balance of payments (Q)	Dec. 16, 1971
Bankruptcy orders (Q)	May 5, 1971
Business names registered (A)	Jan. 27, 1971
Capital expenditure:	
Distributive and service trades (A)	April 28, 1971
Industry's capital expenditure (Q)	Dec. 16, 1971
Catering trades turnover (M)	Dec. 16, 1971
Chemicals industry (Q)	Nov. 25, 1971
Companies:	
Acquisitions and mergers (Q)	Nov. 18, 1971
New companies registered:	
Gt. Britain (M)	Dec. 23, 1971
N. Ireland (M)	Dec. 2, 1971
Computers:	
UK computer market (Q)	Oct. 21, 1971
Construction work overseas (A)	Oct. 7, 1971
Credit:	
Instalment credit business (M)	Nov. 11, 1971
International trade credit (A)	April 14, 1971
ECGD business (Q)	Dec. 16, 1971
Electronics capital equipment deliveries, research and development (Q)	Nov. 4, 1971
Engineering and electrical goods:	
Deliveries and orders (M)	Dec. 23, 1971
Film industry:	
British Film Fund Agency returns (M)	Nov. 18, 1971
Cinema admissions and takings (M)	Dec. 9, 1971
Overseas payments and earnings (A)	Aug. 5, 1971
Registration of films (A)	Feb. 24, 1971
Trends in film going (A)	Aug. 19, 1971
Food:	
Consumption levels (6M)	July 15, 1971
Household consumption (Q)	This week
Footwear industry production, orders and deliveries (M)	Dec. 2, 1971
Foreign trade:	
EFTA trade (Q)	Dec. 2, 1971
Industrial countries trade and production (Q)	Nov. 11, 1971
World exports of manufactures (A)	Sept. 30, 1970
Foreign trade of the UK:	
Direct exports (A)	April 14, 1971
Unit value and volume index nos. (M)	Dec. 16, 1971
Value of overseas trade (M)	Dec. 23, 1971
Value of overseas trade: analysis of trends (Q)	Nov. 4, 1971
Hairdressing trades turnover (M)	Dec. 16, 1971
Hire purchase business (M)	Dec. 9, 1971
Industrial building approved (Q)	Nov. 4, 1971
Industrial development certificates refused (A)	July 15, 1971
Industrial production:	
Index nos. (M)	Dec. 23, 1971
N. Ireland index (M)	Dec. 2, 1917
Wales index (Q)	Dec. 23, 1971
Insurance companies assets (A)	Aug. 12, 1971
Investment:	
Book values of overseas direct investments (every 3 years)	Sept. 23, 1970
Industry's investment intentions (3 times a year)	Oct. 14, 1971
Investment and earnings overseas (A)	April 7, 1971
Laundries and dry cleaners turnover (M)	Dec. 16, 1971
Machine tools deliveries and orders (Q)	Dec. 16, 1971
Man-made fibres:	
Analysis of production (Q)	Nov. 4, 1971
Deliveries (Q)	Nov. 4, 1971
Production (M)	Dec. 16, 1971
Volume of production (M)	Dec. 16, 1971
Motor industry:	
Car and commercial vehicle production (M)	Dec. 2, 1971
Motor trades turnover (M)	Dec. 16, 1971
Office development permits (Q)	Dec. 9, 1971
Partnerships registered (A)	Jan. 27, 1971
Pension funds: assets (A)	Aug. 26, 1971
Retail prices index (M)	This week
Retail trades:	
Index nos. (M)	Dec. 9, 1971
N. Ireland index (M)	Dec. 23, 1971
Royalty transactions (A)	Mar. 31, 1971
Shipping:	
Nationality of vessels in UK sea-borne trade (A)	Feb. 10, 1971
Steel consumption (Q)	Dec. 16, 1971
Stocks:	
Distributive and service trades (A)	Dec. 23, 1971
Industry's stocks (Q)	Dec. 16, 1971
Retail (M)	Dec. 16, 1971
Television:	
Overseas payments and earnings (A)	Aug. 5, 1971
Textiles:	
Activity in the textiles industry (Q)	Nov. 11, 1971
Clothing and textile orders and deliveries (M)	Nov. 25, 1971
Cotton production (M)	This week
Hosiery production (M)	This week
Wholesale houses sales (M)	Dec. 23, 1971
Wool exports (Q)	Sept. 9, 1971
Wool output (M)	This week
Tourism:	
International tourism (A)	Oct. 28, 1971
UK tourist traffic (M)	Dec. 16, 1971
UK official reserves (M)	Dec. 9, 1971
Wholesale prices:	
Average prices of selected commodities (A)	Feb. 24, 1971
Index nos. (M)	Dec. 16, 1971

Dept. of Trade and Industry organisation, etc.

Subjects	Last published
British commercial representation overseas	Oct. 7, 1971
Business Monitor titles	Dec. 23, 1971
Customs notices of interest to exporters	This week
Directory of DTI (formerly BOT) departments and their work	April 8, 1970
DTI addresses (former BOT offices)	Dec. 16, 1971
DTI Regional Directors	Mar. 3, 1971
ECGD local offices	This week
Index Jan.-Mar. 1971	May 26, 1971
Official receivers offices	May 20, 1970
Programme of trade promotions	Oct. 21, 1971
Release dates of economic statistics	This week

newtechnology

Number 53 December 1971 A supplement to *Trade and Industry*

COST—Realistic Steps to European Co-operation in Science and Technology

by C. L. Silver, Europe Industry and Technology Division, DTI

SEWAGE sludge and the weather are not subjects that might normally be associated with the work of the Department of Trade and Industry. But these two topics form part of a whole series of subjects on which European co-operation is now moving forward and which Mr. Fred Corfield, DTI's Minister for Aerospace, discussed in Brussels at the end of November with technology Ministers from 18 other European countries.

Mr. Corfield's responsibilities cover not only aerospace but also the other advanced technology industries. And because DTI has a greater interest in the range of projects discussed in Brussels than any other Government Department, Mr. Corfield played a co-ordinating role for the whole of Whitehall at the Conference, which was held under the auspices of COST—Co-operation in Science and Technology. In the event, the Conference marked a modest step towards the pooling of scientific and technical resources within Europe in those fields which play an increasingly important role in economic and social progress.

There are those who think that the COST acronym is a little unfortunate. Too many technological projects cost too much. But one of the main features of COST is that the projects within it are not expected to be very costly. Indeed, although the total UK commitment which Mr. Corfield entered into in Brussels in November amounts to about £1¼ million per annum for several years ahead, even this is an exaggeration of the total amount which Departments will need to spend in support of these projects since very much of the work represents a co-ordination of existing activities rather than the creation of new ones.

COST had its origins way back in the days when the technological gap was something with which many in Europe were obsessed. Out of it, there was born in the Six the idea of trying to create co-operation in Europe on a range of sensible projects which would have some industrial interest or would be of direct benefit to society and with which other countries, particularly the United Kingdom, could be associated. In the end a vast array of projects emerged and when work really got going on studying them in detail about two years ago the scope was widened to include not only the Six and the applicants for membership of the Common Market, but all the other EFTA countries, Spain, and at a later stage, Greece, Finland, Yugoslavia and Turkey.

Nineteen nations is a very large number to co-operate in a series of small projects. But one of the virtues of the COST approach is that countries can pick and choose and not all countries need take part in all the projects. So, of the seven projects on which the Ministers signed agreements on November 23, only France and Italy propose to take part in all of them, while at the other extreme Portugal will take part in only two, and Greece and the Republic of Ireland in one each. The United Kingdom has signed up on five although it has given notice that it may want to join a sixth at a later stage.

What are the projects for which we have signed up? They are:

(*a*) A pilot data processing network
(*b*) Studies of materials for gas turbines
(*c*) Studies of the behaviour of sulphur dioxide in the atmosphere
(*d*) The development of methods of analysis of organic micropollutants in water
(*e*) The characterisation and incineration of sewage sludges.

The two we did not join were those for:

(*a*) Studies of aerials for satellite communications
(*b*) Studies of materials for desalination plant.

It was decided not to join these because we thought that there was not much point in putting Government money into them if we could not get industrial support for them—and this so far we have been unable to muster.

Apart from these five projects, Mr. Corfield supported three resolutions which were before the Conference of Ministers. These supported in general terms two major projects on which a great deal of further work needs to be done before agreements can be signed. They are for the establishment of European centres for information on computer programs, and for research into medium-range 4-10 day weather forecasting. The third resolution was to give support to a project which will actually be carried out in OECD. Although this project is one where the Department of the Environment takes the lead (since it is concerned with the study of traffic flow problems between the major European centres of population as they are likely to develop in the closing decades of the century) there is a very strong DTI interest. Out of this study could come recommendations for the development of aircraft or of new forms of fast train, including the possibility of tracked air-cushioned vehicles. Out of it, too, may come recommendations about the infrastructure which could well fall within DTI's interest, eg new airports.

When the Aerospace Minister was in Brussels he expressed the hope that when the Working Party have finished their work on the proposed Centre for medium-range weather forecasting, it will emerge that the best place for the Centre is in the United Kingdom next to the Meteorological Office at Bracknell. We think we have the best weather forecasting facilities in Europe there and the benefit of our experience would give the Centre a much quicker and more economical send-off. It would also mean a major technological institute of a European character in the UK. The resolution about the Computer Software Centre also has special interest for us. Although this is likely to be set up at the Euratom Joint

(continued on page iii)

Government R & D—a Green Paper

UNDER cover of a Green Paper†, the Government have published reports on the organisation and management of Government research and development (by Lord Rothschild, the Head of the Central Policy Review Staff) and on the future of the Research Council system (by a group appointed by the Council for Scientific Policy under its Chairman, Sir Frederick Dainton).

Both reports and the Government's covering memorandum are published in Green Paper form to allow time for a wide public debate and for the issue involved to be discussed with the scientific community during the next two months. The Government's final conclusions will be published in a White Paper as soon as possible thereafter.

The proposals in the two reports will be discussed with the Royal Societies, the Council for Scientific Policy, the Research Councils and the appropriate Staff Associations. The Government would also welcome comments from other interested parties and these should be addressed to the Government's Chief Scientific Adviser at the Cabinet Office, Whitehall, London, SW1, and should be received not later than Friday, January 14, 1972.

Report by Lord Rothschild

The Report discusses the organisation and management of Government R & D. It defines applied R & D as that which has a practical application as its objective. The end product or objective for applied R & D is:

(*a*) A product, eg a tank, an antibiotic, a nuclear reactor, or an artificial hand;
(*b*) A process, eg for the manufacture of an antibiotic; or
(*c*) A method of operation, eg to prevent collisions in the English Channel, or to speed up the delivery of letters.

The Report contains many recommendations, most of which are based on three basic principles.

First, applied R & D should be commissioned by a customer who decides, with advice or on his own initiative, that an R & D programme is needed to achieve a specific objective. This customer decides how much can be spent on the programme and pays the bill. The work is then carried out by a contractor responsible for the efficient conduct of the research. This is called the customer/contractor principle. The needs of laboratories to engage in general research as well as the commissioned applied R & D should be met by a General Research surcharge of about 10 per cent on applied R & D contracts.

Second, the Report considers that this fundamental principle should apply to applied R & D undertaken by the Research Councils as well as to that undertaken by executive departments. In the case of the latter, the Report proposes a number of organisational changes in departments, notably the establishment in each of a Chief Scientist organisation to help the customer define his applied R & D needs; and a separate Controller R & D to act as the contractor. It further proposes that applied R & D work at present carried out by the Research Councils with funds provided by the Department of Education and Science within the Science Budget should in future be commissioned by the responsible executive departments in accordance with the customer/contractor principle. The grant in aid which the Research Councils at present receive from the Department of Education and Science (the Science Budget) would be reduced correspondingly. This need not imply any reduction in the funds received by the Research Councils; merely a redistribution of the sources.

The third major recommendation is that the flow of scientists from departmental research to other work in the Civil Service should be greatly accelerated in order to ensure that able people gain the experience they need to fit them for top management.

Report by the Council for Scientific Policy

The Report by a Working Group of the Council for Scientific Policy deals with the future of the Research Council system. The Group, chaired by Sir Frederick Dainton, presented its report in May. The major conclusion of the Report is that the Research Councils ought to be more closely integrated among themselves and with public policy and social needs. It stresses the need to avoid fragmentation of research effort and recommends that the Councils should stay with the Department of Education and Science because:

(*a*) They have close links with higher education in respect of research support and the training of manpower;
(*b*) The work of the Councils is closely interrelated and there is no neat correspondence between Councils and Departments;
(*c*) Dispersing them would lead to duplication of effort and reduced co-ordination.

The Report classifies scientific work as *tactical*, ie the science and its application and development needed by departments of state and by industry to further their immediate executive or commercial functions; *strategic*, ie the broad spread of more general scientific effort which is needed as a foundation for this tactical science; and *basic*, ie research and training which have no specific application in view, but which are necessary to ensure the advance of scientific knowledge and the maintenance of a corps of able scientists, upon which depends the future ability of the country to use science. The Report points out that there is no clear-cut boundary between these classes and that the second and third are closely bound up with the work of the Research Councils and higher education. The strategic science undertaken in applied fields by the Councils provides the foundation of knowledge without which the tactical science needed for applied R & D could not be undertaken.

The main conclusions of the Report are that:

(*a*) The five Research Councils should be knitted together more closely;
(*b*) The central function of the Council for Scientific Policy should be strengthened by establishing a Board of the Research Councils which would be responsible for ensuring that the Research Councils met the requirements of executive departments for scientific support.

The Green Paper

Covering these two reports the Government have published a short memorandum, *A Framework for Government Research and Development*. In this the Government endorse the 'customer/contractor' principle and consider that it should be implemented in respect of applied R & D carried out or sponsored by the Government, whether by the Research Councils or elsewhere. Subject to this principle, the Government believe that it would be right to preserve the Research Councils under the sponsorship of the Department of Education and Science. They further believe that it would continue to be desirable for a body of authoritative advice to be available to the Secretary of State for Education and Science on the allocation of her Department's Science Budget.

† *A Framework for Government Research and Development*, Cmnd. 4814, HMSO, 52½p.

A new lease of life for timber

by Constance Webster, Forest Products Research Laboratory

DEVELOPMENTS in recent years at the Department of the Environment's Forest Products Research Laboratory (Timberlab) have led to new approaches to the use of timber which give this, one of the oldest building materials, such a new lease of life that architects, builders and joinery manufacturers may well regard it as a new material and benefit from completely re-thinking their approach to it.

The research engineers foresaw, some time ago, that the closer design moved towards optimum economic use of timber, the greater would be the need for the raw material to be available to an accurate strength specification—thus widening the scope for further sophistication of timber engineering while at the same time minimising any risks attendant on the reduction of cross-sections to the optimum economy-with-safety level. Timberlab had produced a prototype machine for accurate stress-grading, but the development was not taken up commercially and work was concentrated on visual stress-grading until a combination of Government research and commercial development in Australia produced a machine on a similar principle, which enabled Timberlab to take up the work where they had left off. The result is that, in application of machine stress grading, Britain is now ahead of other countries: machine stress-graded timber has begun to be available commercially and is already in limited use for structural timber and scaffold boards. The machine, by application of non-destructive deflection, which is closely related to ultimate breaking load, sorts each piece accurately into a defined strength category, at a rate of four hundred foot-run a minute. This actual *measurement* of strength, as opposed to the *assessment* obtained by visual grading, means that the designer and specifier will have access to what is virtually a new material, with all the versatility of timber but with past uncertainties and unnecessarily large safety factors eliminated.

Many joinery products require long, clear lengths of timber which are increasingly difficult and costly to obtain. The utilisation of short lengths and off-cuts is essential in order to keep down costs. To this end, Timberlab devised a machine for end-jointing timber on the principle of the structural finger-joint, but with two important differences. The joint, which is for non-structural and semi-structural use only, has such short 'fingers' that all but a fraction of the full length of component pieces is utilised and, because the 'fingers' are formed, not by cutting, but by insertion of a metal die into the end grain, expensive cutter maintenance, and delays while cutters are changed, are eliminated. The Laboratory's work on development of the joint and of fast mass-production methods was followed by commercial development of pre-production machines which were assessed at Timberlab and in industry and the manufacturers have recently started production of the fully tested commercial machines.

Many an architect who has specified a clear finish for western red cedar cladding or for exterior joinery must have regretted it when he saw the peeled varnish and dirty, discoloured appearance a year or two later; and those responsible for maintenance, whether householders or local authorities, often bemoan the cost of scraping and re-coating. Again, timber is a new material, because the 'natural' look, without expensive maintenance, is now available due to recent research at Timberlab. By incorporation of certain inorganic solids with a refractive index matched to that of the varnish base, clear coatings have been produced which protect the timber substrate from the action of ultra-violet light, the main cause of degrade by flaking and discoloration. These new varnishes, which could almost be called transparent paints, are estimated to last three or four times as long as the present varnishes. Equally important, because they do not flake, but only become duller and slightly 'chalky', maintenance is only a matter of wiping down and re-coating after an estimated five to seven years. Varnishes based on the Timberlab formulation concept are under commercial development and just becoming available for use in the building industry.

The increasing use of building components, and the possibilities associated with timber-frame construction, lead to the requirement for rapidly mounted exterior surfaces if the advantages gained in rapid assembly of the structure are not to be offset by slow cladding and roofing methods. Research in progress aims to discover reliable combinations of exterior grade plywood and attractive surface finishes, to give the architect and builder new scope for meeting urgent building requirements with a 'new-look' timber material, pre-finished and easy to erect. Five years' exposure tests have just been completed, with plywood faced with aggregate-textured coatings, thin films, thick laminates, roof coatings, clear coatings and paint systems. Useful results have led to a further series of trials, while parallel tests have also been started using fibreboard as a substrate.

Research on preservative treatments for timber and, not least the Laboratory's cost/benefit approach to this subject, have ensured that decay of timber in buildings is, if not a thing of the past, something which need not happen if architects and builders care to take the right advice. Recent work on weather-tightness of windows and doors and on sound insulation of these components is now showing results which will lead to much more satisfactory indoor environments.

More information: The Director, Forest Products Research Laboratory, Princes Risborough, Aylesbury, Bucks.

European Co-operation in Science and Technology

(continued from page i)

Research Centre at Ispra, there is a very good chance that a major part of the work will be put out on contract to the National Computing Centre in Manchester.

What of the future of this work? There is plenty more for the experts to do and still many problems for the Group of Senior Officials, on which the UK has been represented by DTI, to work on over the next year or two. There are a number of projects in the pipeline, some of considerable importance, which were not ready to be considered by the Ministers. These concern such things as electronic traffic aids, a European data buoy network for meteorological and oceanographic purposes, and superconducting generators. The interest in some of these projects for the industries which are the concern of the DTI is quite obvious.

Compared with major international projects in which the Department is engaged like Concorde, COST may seem like something very small. But there is rather more significance attached to it than might appear at first sight. All of the projects are of a kind closely related to the needs of ordinary people. They are a reflection of the move that is already taking place throughout the world in the direction of trying to get science and technology applied much more directly to the things in which ordinary people are directly interested. The other aspect is that it shows for the first time a determination to find flexible ways of getting co-operation in Europe in order to make the best possible use of the resources that we already have, rather than creating great new international research laboratories which later turn into problems for everyone.

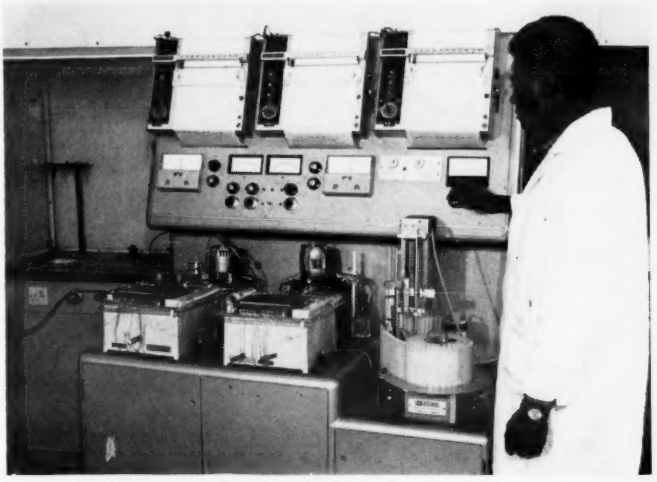
Automated Analysis at the Laboratory of the Government Chemist

by R. Sawyer, Superintendent of Research

The Laboratory of the Government Chemist has three main functions: to provide an analytical service to Government departments; to advise Government departments on analytical and other scientific matters; and to conduct research in analytical chemistry where a public need exists for improved or new methods of analysis. It has a staff of about 400, and analyses some 250,000 samples a year. Its overall effort can be broken down into: (1) analytical work directed towards revenue collection (40 per cent of the effort); (2) analytical work concerned with public-health protection, eg, in the area of foods, drugs, agriculture, radiological hazards and exposure to noxious fumes (40 per cent); and (3) analytical research and the establishment of official specifications (20 per cent). Where an analysis in any of these fields involves an operator in essential but repetitive tasks, there is not only a constant battle to defeat monotony and maintain a high standard of performance, but also a risk of delay in turn-round of samples when staff are absent or the flow of work increases unexpectedly. The obvious answer is to automate as many of the stages as possible, and in recent years the Laboratory has, in fact, gained a great deal of experience in designing and building special-purpose automatic analytical equipment. Many of the systems developed have features which offer scope for automating analytical procedures in fields other than those covered by the Laboratory's terms of reference, and this short review of the customs and excise sector is intended to give some idea of the Laboratory's approach to automation.

Analysis of beer

DUTY on beer is levied acccording to the strength ('original gravity') of the wort from which it is brewed, and is hence proportional to the total content of soluble solids (mainly sugars) in an aqueous extract of the original grain. The Laboratory receives samples for analysis from HM Customs and Excise (1) to assess duty at the point of manufacture in the UK, or when foreign brews are imported, and (2) so that duty can be refunded when beer is exported or becomes unavailable for normal retail sale in the UK. The analytical method used is laid down by statute and regulations, and involves determination of the specific gravity of the non-volatile residue (extract) of a measured volume of beer made up to the volume of the original beer sample at the fixed temperature (60°F) at which the sample was taken. To this result is added a value for 'gravity lost' (derived from the specific gravity of the distillate, and from an experimentally determined table published in the Regulations), and this total gives the desired 'original gravity'. Entailing determination of the residual non-fermented sugar content and the alcohol content, the process is a lengthy one, demanding from the operator manual dexterity and close attention to detail. Since the Laboratory examines more than 30,000 samples of beer each year, the statutory method is normally employed only to check the result of a screening test should it be outside set tolerances and likely to be disputed. One such test, used at the Laboratory for several years, takes advantage of the fact that the refractive index of a sugar-alcohol water solution is an additive function—and the specific gravity a subtractive function—of the individual concentrations. Expressions for alcohol content and 'extract' content can therefore be derived in terms of the two parameters,



This automatic beer analyser operates four times as fast as the manual method which it replaced, and its introduction reduced the total analysis time to 15 minutes. Like all the other equipment illustrated in this article, the analyser was both designed and built by the Laboratory of the Government Chemist.

and the required values can then be obtained by consulting experimentally determined tables. However, large amounts (100–150 cm^3) of degassed samples are needed for the analysis, and the measurements have to be made precisely at the fixed temperature, so that even this test involves the operator in detailed, but repetitive and tedious, work. Initial research to replace the procedure by one permitting the alcohol and total reducing sugar content of the beer sample to be established automatically showed that a chemical method would require prior separation of the alcohol. To achieve this, a continuous-distillation unit was devised which enabled both alcohol and volatile acidity to be determined on a single distillate—a development which offered the advantage of also enabling the analytical technique to be extended to 'spoilt' or sour beers (which hitherto had had to be analysed by a lengthened version of the statutory method). In 1967 a basic two-channel analyser (for sugar and alcohol) was introduced for routine determination of the original gravity of sound beers, and subsequently a third channel was added to permit analysis of sour beers. The instrument operated continuously at a rate of 20 samples per hour, and the *dwell time*—the time taken for one sample to go right through the system—was 30 minutes (four times as fast as the refractive-index/specific-gravity method), and, despite the additional work (eg, preparation of reagents) associated with the substitution of a chemical procedure for one based on direct physical observation, adoption of the automated process enabled the number of operatives to be reduced from eight scientific assistants to three scientific assistants and one laboratory assistant. Since then, improvements in temperature control and in the design of the distillation and reaction baths, and the use of alternative sensing systems, have reduced the overall analysis time per sample to 15 minutes (the operating rate remaining the same) and also decreased the number of reagents required. Work is now in progress to process the analytical data by computer, with the aim of obtaining an automatic print-out of the analytical results.

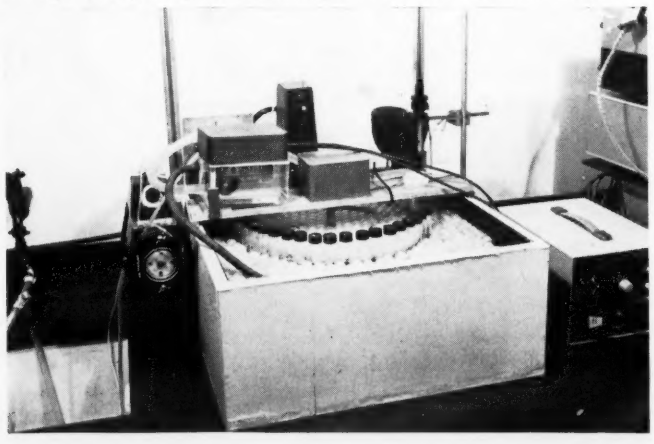
Analysis of 'tinctures' and essences

Tinctures (eg food flavours, toilet goods, perfumes, certain medicines) are manufactured from duty-paid alcohol, and when 'drawback' of duty is claimed on goods for export the Laboratory has to check samples for alcohol content, and also for methyl alcohol (which would be present if duty-free methylated spirits were employed). The content ranges from 1 vol per cent (eg, in gripe waters) to 85 vol per cent (eg, in flavour concentrates). In the absence of any single method of operation, the analysis had, until 1967, to be carried out using multiple-distillation procedures (removing essential oils from the first distillate by solvent extraction) and establishing alcohol strength by determining the specific gravity of the clean distillate. Methanol content was checked for by simultaneous measurement of the distillate's refractive index, and the analysis confirmed, if necessary, by chemical means. With the advent of *Poropak* column materials, work was started on a gas chromatographic method, and a procedure was eventually introduced, with considerable increase in overall productivity. Efficiency is being improved still further by automation of such manually operated stages as the dilution of samples with internal standards and the working out of results. In the final procedure the samples, together with standard solutions, are placed in a series of capped tubes on a turntable. In rotation, they are then diluted, mixed with the internal standards and transported to an interface unit consisting of a flow vessel with liquid inlet and outlet, a gas inlet and a capillary connection to the gas chromatographic column. The capillary dips into a representative pool of sample liquid diluted with internal-standard solutions, and this mixture is injected by applying a gas overpressure to the system, which forces a slug on to the column. During development of the chromatogram a 'bleed-back' of gas cleans out the injection line, and the system goes into a wash cycle, ready for admission of the next specimen. Output is in analogue and digital form, the digital signal appearing on punched tape as an integrated peak area for each component (ethanol and the propanol and isopropanol internal standards). The characters on the tape also indicate whether the areas relate to an unknown sample or to a standard ethanol. The presence of methanol is monitored by means of a stream splitter with a second detector at higher sensitivity. Processing of the data, including calibration and production of a report, is carried out by computer. The automated unit can handle four samples per hour, can operate continuously for 24 hours, and, in common with the distillation unit of the beer analyser, is capable of analysing wines to the precision required by the banded duty structure of the UK tariff.

Analysis of potable spirits

Duty on potable spirits is levied *pro rata* on their volume and alcoholic strength at manufacture or when imported, and the

Prototype version of the automatic system for measurement of relative density developed by the Laboratory of the Government Chemist.



Automatic gas chromatograph for analysis of tinctures and essences. Diluent and internal standards are added automatically.

Laboratory has therefore to produce an analysis which can be reproduced precisely if challenged. The statutory method of analysis is mandatory. Based on a traditional distillation process employing the specific gravity of the distillate at 60°F as a measure of alcohol content, it involves the operator in a number of detailed and laborious tasks, such as temperature adjustment, volume adjustment and weighing at the fixed temperature. Since some 20,000 samples of spirits are received for analysis each year, automation offers great advantages, and for the purposes of automation the Laboratory divided the process into two: measurement of specific gravity and the distillation stage.

Commercially available instruments for measurement of the relative density of liquids having proved unsuitable for the Laboratory's purpose, work was undertaken to develop a purpose-built unit. The general requirements were for a system with a flow-cell capable of accepting at least 20 samples an hour and determining gravities over the range 0.97–1.00 with a precision of $\pm$ 0.00002, and requiring less than 65 cm³ of solution for the total operation. To satisfy these requirements, the Laboratory has designed, and built, a sampler-transport unit with a temperature-controlled flow-cell with a total volume of 8 cm³ (three fills being necessary before the reading, to minimise cross contamination) and containing a totally submerged float supported by a horizontal beam. The relative density of the distillate is derived from the voltage output from a pair of position-sensing transducers mounted vertically above and below the float, the voltage being measured by a digital voltmeter and the data then transcribed on to paper tape. The analysis is made as follows. The distillates—which still have to be prepared manually, since work to automate this stage is not yet complete—are placed in capped tubes on a turntable, and the solutions are adjusted to the fixed temperature and transported in turn to the flow-cell. Five readings are taken under static conditions and the data are processed, via data link, by computer. Calibration curves ('proof spirit' against reading) are calculated, and the computer print-out is in the form of a report on a series of samples. Standardisation is achieved using standard alcohol solutions. Sampling, instrument reading and production of punched tape take about 2 minutes per test.

Analysis of gas oils

Hydrocarbon oils (diesel and derv) are used to fuel road vehicles and are subject to duty; gas oils, which are often identical in composition with diesel oils, are used to fuel stationary machines and for other industrial purposes, and are exempt from duty. Markers are used (furfural, quinizarin and C.I. Solvent Red 24 are specified in the statutory instrument) to differentiate between the oils and so to provide proof when

(continued on page vii)

Warren Spring's RACE Terminal

It puts powerful computer facilities at your disposal . . . when and where you want them . . . automatically

The problem

There are many applications in industry, commerce and research which pose something of an economic problem from the data-processing point of view. One could cite in example the data derived via loggers, multi-channel analysers, etc, in such areas as:

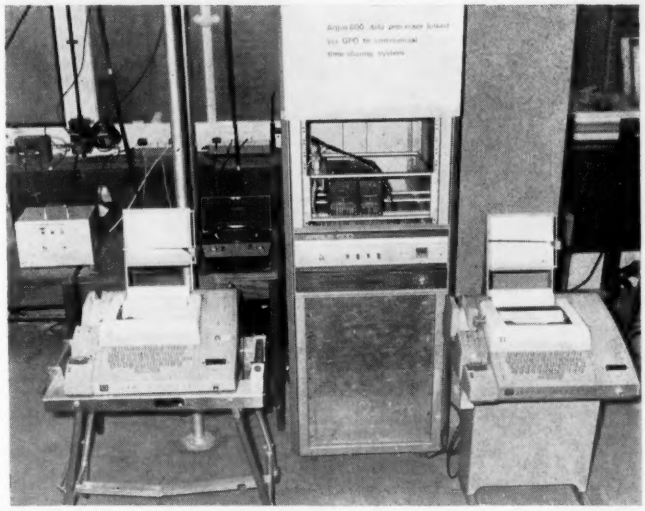
field trials, pilot-plant work, pre-installation plant surveys, and consultancy work;
laboratory automation—eg, in the fields of gas chromatography, X-ray diffraction, infra-red spectrophotometry, X-ray fluorescence, Fourier-transform instrumentation;
plant-control back-up—eg, optimisation, scheduling, controlled start-up and shut-down, plant-performance monitoring; and
environmental-pollution surveys, traffic surveys, etc.

The problem is easily stated. In many cases, the data are complex enough to demand processing by powerful computing and file-handling facilities, but are accumulated either on an intermittent basis or at a continuous, but very slow, rate. The dilemma here therefore is that, for direct on-line access, a largish computer would have to be purchased, and would then spend most of the day inactive—sitting there, as it were, waiting for the next input of data. But, you ask, why not use a commercial time-sharing computer bureau? A good question, since time-sharing is the obvious way out of the dilemma. The drawback is that access to a general-purpose bureau computer entails either manual intervention or paper-tape handling. Ideally, what is required is some method of *automatically* achieving a direct on-line link with the computer without the need for operator supervision or paper-tape processing. DTI's Warren Spring Laboratory has now come up with a terminal which does just that.

WSL's RACE terminal

Called **RACE** (short for Remote Automatic Computing Equipment), the terminal was developed—with assistance from Honeywell I.S. Ltd.—specifically to provide fully automatic access to a time-sharing bureau in applications where the data needing processing are being produced a) continuously but slowly, or b) intermittently at speeds of up to 30 characters per second. The system consists of four interconnected devices:

* A *Modem* arrangement permitting data transmission on Post Office lines. The *Modem* can be either an acoustic coupler, which is usable with any standard telephone handset and requires no electrical connection to the telephone, or the *Datel Modem* (*Modem* No. 2B, *Datel* 200 series), which can be connected permanently or by jack-plug to the telephone line. The latter may be hired fitted with automatic dialling equipment (D.C.E. No. 1) controllable directly by the **RACE** terminal.
* A teletype ASR (KSR) 33 typewriter, which enables results to be printed, the operation of the terminal to be monitored, and data to be in-put manually.
* A small low-cost computer which controls the flow of data, operates the remote time-sharing computer, and caters for any fast timing actions required by the terminal (on-line) instrumentation.
* The device which collects the raw data for processing—eg, plant instrumentation, data loggers, analytical systems, etc. The data have to be in the form of teletype-drive signals, and data-acquisition systems without this facility have to be linked with a printer-drive module before being connected to **RACE.**



Warren Spring Laboratory's RACE *terminal. Left to right: interface; teletypewriter; acoustic coupler; local control computer; additional teletypewriter.*

RACE's basic mode of operation is as follows:

1. Signing on with the password.
2. Opening data files and storing raw data.
3. Running bureau programs to process the data.
4. Storing data (raw data and/or computed results) in a prescribed form in the bureau files.
5. Printing data at the terminal for immediate use.
6. Closing files and signing off.

To cater for a given application, this sequence can, of course, be varied by modifying the terminal control program. With automatic dialling, **RACE** can call the bureau whenever sufficient data are available for computation, and, if the acquisition rate is very low, the data can be buffered locally and transmitted in a block from time to time, the terminal closing the call during periods of inactivity and setting it up again as soon as required. Since both the Post Office and the bureau charge for time only when the system is connected, this procedure cuts down cost considerably. Automatic dialling also enables greater advantage to be taken of off-peak rates.

Software

To minimise the size of the local computer, the terminal control software is kept to the minimum (1K to 4K of 8-bit words is typical). Basically the terminal recognises the messages from the time-sharing computer, generates replies and commands to the bureau in the desired sequence, and controls the transmission of data from the data-acquisition device.

The time-sharing bureau's software will, of course, be extensive in scope and extremely versatile. It will enable most forms of calculation and data processing (eg, regression analysis, modelling, equation evaluation, statistical analysis and file handling) to be carried out, and can be used to write programs (in Fortran, Algol or Basic) specifically for the application concerned. User numbers and passwords ensure complete confidentiality, and permit the stored data to be

consulted from any standard teletype terminal, not only via the **RACE** terminal. Data can also be supplied manually to the **RACE** system from other terminals, so that its operation can be controlled from any desired location.

How RACE works

The best way of illustrating the advantages and scope of the **RACE** terminal is to describe a typical application. Take plant-performance optimisation and operation scheduling in a process industry, for instance. In particular, consider the case of a manufacturer in the food industry making a complex product in bulk, such as ice-cream. He has an automatic plant, and the product has to be maintained at a specified quality. Output, however, fluctuates with seasonal changes in demand. A record is kept of such plant parameters as temperatures, pressures and flow rates, and these data, in combination with information on sales demand, form the basis for process control. The data *could* be utilised to optimise process control and production scheduling by the linear programming techniques which are now available, but to do so would require a fairly large computer. The calculations would take up only a very little of the computer's time once a day, and to purchase a dedicated computer for the purpose would therefore be out of the question.

RACE solves the problem as follows. A data logger is set up to measure and record the plant parameters, and the data are accumulated in the **RACE** terminal over periods of, say, ½ hour. At the end of each period, the terminal automatically dials the computer bureau, signs on with the manufacturer's user number and password, and requests a data-storage file. The accumulated plant data are then transmitted for storage in the file, and the terminal signs off and disconnects itself from the telephone line. The sequence is repeated every ½ hour throughout the day, each connection lasting for perhaps five minutes. Once a day—or more often, if required—**RACE** sets up the connection as before, but then commands the bureau computer to conduct an optimising program (which would, of course, already be stored permanently on the bureau files). In the optimising and scheduling calculation, the computer processes the data on plant parameters (also taking into account manually in-put information on sales demand), and arrives at the plant-control instructions. Finally the instructions are printed out at the **RACE** terminal for use by the plant control staff, and the instructions, together with the raw and computed data, are stored on a bureau file, available for inspection.

Hence **RACE** provides all the automatic data-processing facilities which go with the use of a medium-size computer . . . at a capital cost which fades into insignificance by the side of that of purchasing a dedicated computer system . . . and at running costs equivalent to the cost of merely buying bureau time for storing data and conducting the calculations.

More information

Warren Spring Laboratory is now discussing ways of exploiting **RACE** commercially, and a system manufacturer is expected to take up its production and marketing in the near future. Meanwhile it may be possible for a potential user to set up a terminal with the aid of the Laboratory and in conjunction with a bureau service. For more information on this or any other aspect of the **RACE** system, readers should contact: Dr. J. P. Stuart, Warren Spring Laboratory, PO Box 20, Gunnels Wood Road, Stevenage, Herts. Tel: Stevenage 3388.

Automated Analysis at the Laboratory of the Government Chemist

(continued from page vi)

gas oil is used as a vehicle fuel to evade duty. The markers can be detected at the roadside by a spot check, but, if a prosecution is contemplated, a full-scale laboratory identification and estimation have to be carried out. The Laboratory does so using a five-stage manual method which entails extraction into alkali, acidification, back extraction into a clean solvent, and subsequent production of a plot of the characteristic absorption spectrum of quinizarin. It takes 1½ days to analyse 18 specimens, and the routine work occupies two juniors full time. However, this throughput has now been increased to three samples an hour by an automated solvent-extraction system, which, based on the operations of the manual method, is currently undergoing commissioning trials. The equipment exploits the principles of batch and continuous analysis. The oil samples are transferred in turn from a turntable to a mixing coil by a piston pump. The stream of oil meets a stream of aqueous alkali delivered at a fixed ratio, and the two phases are mixed in the coil and then separated in a continuous-flow separator. The aqueous phase is passed to a flask containing an excess of acid, and the oil is recirculated through the equipment, via the original container, for a total of six passes before being discarded. The acidified extract is re-extracted with solvent, and a portion of the solvent layer is withdrawn to a flow-cell in a spectrophotometer and the absorption spectrum recorded and numbered.

Automatic solvent-extraction system for identification and estimation of markers in gas oil.

Under study for selective detection of furfural in gas oils is a system employing gas chromatographic separation and a continuous-flow colorimetric detection unit. Furfural is scrubbed out of the gas from the glc column and reacted with a solution of aniline acetate, and the combination of retention time and colour response, in the form of a single peak on a chart recorder, provides the identification.

Data acquisition and processing

The computerisation of the analogue output from an amino acid analyser is a good illustration of the Laboratory's success in automating the processing of data. The equipment in question is a *Technicon* twin-column analyser, operating on a 12-hour cycle, and producing two analogue records per column. Processing the data manually (reading charts, calculating, and preparing a draft report for typing) entailed one staff member in 4 hours' work daily. The Laboratory's use of 'hook-on' modules to perform the task of data capture, and data-link computerisation of the subsequent processing stages, have cut the time for the whole process, including production of a typewritten report, to less than 1 hour.

More information: Mr. R. Sawyer, Laboratory of the Government Chemist, Cornwall House, Stamford Street, London SE1. Tel: 01-928 7900.

HOW TO SUBSCRIBE TO *NEW TECHNOLOGY*

There are two ways in which readers can arrange to receive the *New Technology* supplement regularly: *Either* by taking out a full annual subscription to *Trade and Industry* at £7.60 (including postage).

Or by subscribing to the 12 issues of *Trade and Industry* per year which contain *New Technology* at £1.75 (including postage).

Subscriptions to: HMSO, PO Box 569, London SE1.

Reprints of *New Technology* are available (at 5p per copy) from: New Technology, Room 437, Department of Trade and Industry, 1 Victoria Street, London SW1H 0ET.

news

NEL numerical-control users technical meeting

On January 21, 1972, the National Engineering Laboratory is holding a one-day meeting at the University of Aston in Birmingham for users of NEL NC part programs. Users of 2C.L will be given an opportunity to exchange views and experience (with emphasis on part-programming aspects rather than on computer programs) in two sessions: the morning will be devoted to reports on development and maintenance activities, and the afternoon to presentations by users and to discussions. The meeting is expected to be of interest also to any firm contemplating the introduction of part programming. More information: The Conference Organiser, Birniehill Institute, National Engineering Laboratory, East Kilbride, Glasgow. Tel: East Kilbride 20222 Ext 570.

Reference book on computer courses

The National Computing Centre's reference books on the computer courses available in the UK have built up a reputation for themselves as the definitive handbooks. This year's edition—now available—covers some 2,000 courses. It differs from previous years' in being published in five *Factfinder* volumes: Factfinder 3. Post-Graduate and First-Degree courses (50p); Factfinder 4. Qualifying courses (80p); Factfinder 5. Systems-Analysis and Programming courses (60p); Factfinder 6. Introduction and Appreciation courses (40p); and Factfinder 7. Manufacturers and Consultants courses (50p). All are obtainable from NCC Publications, The National Computing Centre Ltd., Quay House, Quay Street, Manchester M3 3HU.

Physical-property data for chemical-engineering design

The Institution of Chemical Engineers is planning to inaugurate in January 1972 a service which will offer the designer rapid access to data on the physical properties of compounds of particular interest in chemical and petroleum engineering. The service will have available a computer data-bank facility—accessed directly (interfaced with design programs), or indirectly by telephone, telex or mail—which will provide data points for the properties normally required for design. Built up in response to direct requests from designers, and continuously up-dated, the bank now contains data on some 200 compounds, and data on other compounds will also be rapidly obtainable. More information from: Mr. J. Paul, The Institution of Chemical Engineers, 16 Belgrave Square, London SW1X 8PT. Tel: 01-235 3647.

Noise abatement and control

Technology and the Environment is a quarterly publication recently launched by the Department of Trade and Industry to provide a forum through which Scientific Counsellors at British Embassies can report on and discuss international developments in the field encompassed by the title. The first issue covers noise abatement and control. State-of-the-art surveys give a comparative picture of overseas practice and experience, and describe, country by country, the action being taken to combat the constantly growing and increasingly recognised hazards of noise from aircraft, traffic, construction and factories. Future issues of *Technology and the Environment* will deal with water pollution, air pollution and vehicle pollution. More information: Overseas Technical Information Unit, Department of Trade and Industry, Abell House, John Islip Street, London SW1P 4LN. Tel: 01-834 4422, Ext 302 or 601.

Metrication manuals for the engineering industries

Two new manuals—*Metrication for Engineering Management* (price £1.90) and *Metrication in the Machine Shop* (price £1.75)—were published recently by the Metrication Board. *Metrication for Engineering Management* (148 pages), which was prepared by Urwick Technology Management Limited, identifies the major decisions to be taken when an engineering company is going metric and explains how to get the best out of the change. It is designed to help any company develop a metrication programme for its own particular needs. The advice is based largely on studies of three engineering firms who were well advanced in their changeover to metric working, and whose case histories are included in the manual. *Metrication in the Machine Shop* (136 pages), which was prepared by the Machine Tool Industry Research Association, demonstrates that a machine shop can be converted to metric working without great difficulties, but that the best solution will be reached only after assessing the kinds of change to make and their timing. It provides the information necessary for such an assessment, including the different methods of converting machine tools, with their approximate costs. Names and addresses of manufacturers of conversion equipment are given. Both manuals are available through booksellers or from HMSO bookshops.

'Measurement and Automation News'

Sira Institute has just published the first issue of *Measurement and Automation News*, a new quarterly pamphlet intended to keep the reader up to date with Sira's research and development services. The publication is available free to senior executives and technical managers in organisations engaged in the development, manufacture or application of instruments or measurement and control systems. Applications to: Miss A. E. S. Mills, Sira Institute, South Hill, Chislehurst, Kent BR7 5EH. Tel: 01-467 2636.

Low-cost moisture-measuring technique

Developed (by Sira Institute in collaboration with the Wool Industries Research Association) originally for use in the textile industry, the technique is now expected to find application solving drying problems in many other fields. Sira's laboratory tests have, for example, already shown that it can be used to very good economic advantage in industries processing such goods as leather, starch, fertilisers, coke, herring meal, sugar mint, sand, spent grain, pigments and tobacco. The technique is based simply on the measurement of two temperatures (that of the material being dried, and the wet-bulb temperature of the dryer atmosphere), the difference between the two being a measure of the moisture content of the material. More information: Sira Institute, South Hill, Chislehurst, Kent BR7 5EH. Tel: 01-467 2636.

Exporting electrical equipment to Switzerland

Now available from Technical Help to Exporters are up-dated versions of two Technical Digests dealing with electrical goods: No. 13A, series 2, issue 3—*Electrical equipment for use in domestic and commercial situations to Switzerland;* and No. 13B, series 2, issue 3—*Electrical equipment for use in industrial situations in Switzerland.* The Digests draw attention to the relevant specifications, Codes of Practice and technical regulations, and also contain equipment schedules giving details of the specifications, mandatory approval and other information pertinent to each item covered. Also included are a directory of organisations with which the exporter may come into contact, and background information on the electricity supply available in Switzerland and on requirements for earthing, radio-interference suppression, and wiring. More information: Technical Help to Exporters, BSI, Maylands Avenue, Hemel Hempstead, Herts. Tel: Hemel Hempstead 2341.

More information: Where possible, items in *New Technology* indicate the best sources of further information. Readers are advised also to seek information on matters relating to *New Technology* from the following DTI regional offices: Edinburgh, 031-225 1822; Cardiff 62131; Newcastle upon Tyne 27575; Manchester, 061-832 9111; Leeds 38232; Nottingham 46121; Birmingham, 021-643 8221; Bristol 21071; London and South East, 01-684 9781; Eastern, 01-828 4355. In Northern Ireland, information is given by the Dept. of Industrial and Forensic Science, Belfast 21722.

Editorial Office: Department of Trade and Industry, Room 439, 1 Victoria Street, London SW1H 0ET. Tel: 01-222 7877, ext. 2620.

Crown copyright: Extracts may be reproduced freely, provided the source is acknowledged.

Printed in England for Her Majesty's Stationery Office at The Garden City Press Ltd., Letchworth, Herts.

The economy: selected indicators

Series expressed as index numbers and seasonally adjusted except where shown otherwise

SYMBOLS USED IN ALL STATISTICAL TABLES—

.. not available
– nil or less than half the final digit shown
p provisional
r revised
• five week period
Ø fifty-three week period

	Gross Domestic Product (Expenditure estimates)	Index of Industrial Production	Consumers' Income and Expenditure				Fixed Capital Expenditure					Increase in Stocks			
							Total	Selected Components				Total	Selected Components		
			Personal disposable income	Total consumers' expenditure		Retail sales		Manufacturing industry	Distributive and service industries	Dwellings	Public sector excluding dwellings		Manufacturing industry	Wholesalers	Retailers
	at 1963 prices		at current prices		at 1963 prices	at 1966 prices	at 1963 prices					at 1963 prices			
Base of index £m in base year	1963	1963	1963	1963	1963	1966	1963	1963	1963	1963	1963				
	26,973		21,763	20,127	20,127	11,372	4,912	1,070	994	944	1,752	Series in £ million			
1965	108	111.7	115	114	106	..	121	124	119	127	117	376	263	47	31
1966	111	113.2	122	121	108	100.0	124	128	115	128	125	254	143	25	17
1967	113	113.9	127	126	110	101.4	133	124	122	138	142	184	–37	13	22
1968	116	119.8	135	135	113	103.6	139	131	144	146	142	158	23	75	41
1969	118	122.9	144	143	113	103.0	138	140	148	131	131	346	232	26	27
1970	120	124.1	157	155	116	104.2	140	152	157	118	136	329	214	42	51
1969 3rd qtr	119	123.2	145	144	113	103.2	139	145	155	131	130	57	4	10	8
4th qtr	119	123.3	147	147	114	102.9	137 r	145	153	125	130	91	74	2	—
1970 1st qtr	117	123.8	149	149	114	103.3	134	145	146	114	132	–16	42	1	–32
2nd qtr	121	123.5	155	154	116	104.2	143	153	163	119	138	116	55	12	26
3rd qtr	121r	124.3	160	158	117	104.6	141	154	156	120	134	117	44	7	13
4th qtr	122	124.6	163	160	117	104.7	143	157	165	119	139	112	72	23	44
1971 1st qtr	118	124.5	164	162	116	101.9	139	148	148	114	148	84	70	2	–62
2nd qtr	121	125.4	169	170	119	104.3	142	142	164	122	142	–68	–114	12	38
3rd qtr	123 p	126.3			120 p	105.4	140 p	142 p	163 p			–24 p	–51	–9	7
Apr		124.8				104.7									
May		125.3				104.9									
Jun		126.2				103.4									
Jul		125.8				105.0									
Aug		126.1				106.1									
Sep		126.9				105.2									
Oct		125.5 p				108.3									

	Orders	Prices and Costs					Labour			Trade (§)		Balance of Payments current balance
	Engineering and electrical goods† orders on hand (end period)	Retail prices index		Wholesale price index: all manufacturing industry §§		Basic hourly wage rates (all industries and services)‡	Wholly unemployed excluding school leavers	Unfilled vacancies for adults	Civil employment	Imports(‖)	Exports(¶)	
	at 1963 prices	Index‡	% increase on year earlier	Basic materials and fuel used‡	Manufactured products: home sales‡		Mid-month or monthly average		Quarter or quarterly average	at current prices		
Base of index £m in base year	Dec 1963	Jan 16,1962		1963	1963	Jan 31, 1956	Series in thousands			1963	1963	Series in £ million
										4,362	4,282	
1965	119	112.1	*4.8*	105.4	106.8	157.9	308	265	24,784	116	112	–52
1966	115	116.5	*3.9*	108.0	109.6	168.5	323	255	24,835	120	121	83
1967	106	119.4	*2.5*	107.5	110.9	175.3	512	174	24,476	130	120	–298
1968	106	125.0	*4.7*	117.3	115.3	187.3	541	188	24,331	159	146	–288
1969	117	131.8	*5.4*	121.4	119.8	197.4	535	200	24,304	165	165	440
1970	125	140.2	*6.4*	126.2	127.7	217.7	574	186	24,135	181	184	612
1969 4th qtr	117	133.7	*5.1*	124.1	121.7	201.6	544	199	24,249	169	172	167
1970 1st qtr	118	136.2	*5.0*	126.3	124.2	209.0	561	192	24,275	171	181	215
2nd qtr	122	139.5	*5.8*	126.1	126.6	214.0	563	187	24,138	183	183	113
3rd qtr	123	141.1	*6.9*	124.9	128.7	219.5	592	185	24,072	178	175	76
4th qtr	125	144.0	*7.7*	127.3	131.4	228.3	581	177	24,054	190	199	208
1971 1st qtr	120	147.9	*8.6*	129.7	134.4	237.5	631	146	23,824	189	186	78
2nd qtr	116	153.2	*9.8*	133.1	137.2	242.4	725	131		198	212	270
3rd qtr	118 p	155.3	*10.1*	133.9	139.2	248.5	802	121		196	216	342
4th qtr							850 p	116 p				
May	117	153.2	*9.8*	133.0	137.3	242.8	731	130		192	206	
Jun	116	154.3	*10.3*	133.5	138.0	245.1	740	133		203	218	
Jul	117 p	155.2	*10.1*	135.3	139.0	247.1	788	122		195	212	
Aug	117 p	155.3	*10.3*	133.8	139.3	248.6	799	123		191	215	
Sep	118 p	155.5	*9.9*	132.5	139.5	249.7	819	118		203	222	
Oct	118 p	156.4	*9.4*	132.3 p	139.7 p	250.4 p	833	116		201 p	217 p	
Nov		157.3	*9.2*	132.7 p	140.0 p		855	117		196 p	201 p	
Dec							862 p	114 p				

(†) New series covering SIC Orders VII-IX; previous series also included part of Order XI. (‡) Not seasonally adjusted.
(§) On a balance of payments basis. (‖) Includes payments for United States military aircraft and other balance of payments adjustments.
(¶) Includes balance of payments adjustments and allowances for factors affecting recording
(§§) This now includes food industries.

National Food Survey: household food consumption in the third quarter of 1971

THE main results of the National Food Survey in the third quarter of 1971 are summarised in the tables below. The estimates are derived from records provided by a sample of 1,904 households throughout Great Britain.

Average expenditure on food (excluding sweets and soft drinks) bought for consumption in the home rose by only 2p (1 per cent) in the third quarter of 1971 to £2.34 per person per week; decreases in the prices of seasonal foods more than compensated for increases in consumption and this partly offset increased expenditure on other foods. Compared with the third quarter of 1970, expenditure rose by 23p (nearly 11 per cent). Although purchases of convenience foods (particularly canned foods) were again lower than in the corresponding period of the previous year, they showed some recovery from the low level recorded in the first half of 1971.

Average consumption of liquid milk showed a slight decline in the third quarter. Average purchases of cheese also declined slightly but nevertheless continued to be above the previous year's level. Because of the continued world shortage, butter prices were approximately 50 per cent higher than those in the third quarter of 1970 and estimated household consumption per head fell from 5.9 oz. to 5.4 oz. per person per week. Purchases of margarine over the year rose from 2.9 oz. to 3.1 oz. per person per week. The decreased level of purchases of lard and compound cooking fat in the summer months continued later into the year than in other years, but purchases appeared to be back to their normal level by the end of the third quarter. Eggs were a little cheaper than in the previous quarter but consumption declined slightly to 4.45 eggs per person per week, the lowest quarterly average recorded since 1959. Purchases of sugar rose seasonally to 15.9 oz. per person per week and a slight increase was also recorded in consumption of preserves.

Consumption of carcase meat averaged 15.6 oz. per person per week compared with 15.9 oz. in the previous quarter and 15.8 oz. a year ago; purchases of mutton and lamb increased but did not fully compensate for a decline in purchases of beef and pork. The quantity of poultry purchased was slightly lower at 5.0 oz.; there was also some decline in the consumption of bacon and canned meats, partly offset by some increase in cooked meats and meat pies. Average consumption of fresh and processed fish was rather lower than in the corresponding months of 1970, but canned fish, cooked fish, fish products and quick-frozen fish showed little change.

Consumption of fresh vegetables showed the usual seasonal increase, and compared with a year earlier there was also a small increase in consumption of fresh greens. Purchases of most varieties of quick-frozen vegetables were also greater than a year before but those of canned vegetables were rather lower. Average prices paid for

TABLE 2. ENERGY VALUE AND NUTRIENT CONTENT OF THE DIET AS A PERCENTAGE OF RECOMMENDED INTAKES (a) (ANNUAL AND QUARTERLY MOVING AVERAGES)

	National averages				Families with 4 or more children			
	Annual averages			Moving averages	Annual averages			Moving averages
	1968	1969	1970	year ending July-Sept. 1971	1968	1969	1970	year ending July-Sept. 1971
Energy	108	109	111	108	99	102	100	98
Protein	127	126	128	125	115	114	114	110
Calcium	191	194	194	194	165	167	164	163
Iron	122	121	124	123	109	108	110	104
Thiamin	125	122	124	124	123	119	118	116
Riboflavin	129	130	130	128	134	132	131	126
Nicotinic acid	189	190	194	190	174	181	182	174
Vitamin C	181	181	184	186	165	155	164	160
Vitamin A	203	199	200	197	197	199	190	177
Vitamin D (b)	90	84	84	84	64	59	58	58

(a) Department of Health and Social Security. *Recommended Intakes of Nutrients for the United Kingdom*. Reports on Public Health and Medical Subjects, No. 120, HMSO, 1969.

(b) The Survey does not evaluate welfare and pharmaceutical sources of this vitamin. Furthermore, most adults require no dietary vitamin D, since they obtain all they need from the action of sunlight on the skin.

TABLE 1. ESTIMATES OF AVERAGE HOUSEHOLD FOOD CONSUMPTION

oz. per person per week (a)

	Year 1969	Year 1970	3rd quarter 1970	2nd quarter 1971	3rd quarter 1971
Total household food expenditure	£2.00	£2.11	£2.11	£2.32	£2.34
Liquid milk (pints)	4.89	4.63	4.59	4.72	4.63
Other milk (eq. pints)	0.36	0.41	0.47	0.39	0.40
Cheese	3.50	3.59	3.60	3.78	3.68
Butter	6.15	5.99	5.92	5.55	5.40
Margarine	2.78	2.86	2.86	3.03	3.10
Lard and compound cooking fats	2.08	2.21	2.24	1.85	1.83
Eggs: purchases (number)	4.41	4.44	4.39	4.41	4.25
consumption (number)	4.60	4.66	4.70	4.59	4.45
Preserves	2.67	2.57	2.57	2.50	2.56
Sugar	16.18	16.94	17.61	15.19	15.87
Beef and veal	7.70	7.80	7.35	7.51	7.26
Mutton and lamb	5.34	5.25	5.66	5.31	5.72
Pork	2.78	2.83	2.83	3.11	2.62
Bacon and ham, uncooked	5.11	5.32	5.48	5.06	5.06
Bacon and ham, cooked (including canned)	0.94	0.94	0.99	0.96	1.04
Poultry and cooked chicken	4.93	5.06	5.24	5.30	4.96
Other cooked meat (not canned)	0.67	0.67	0.71	0.76	0.79
Other canned meat	2.43	2.69	2.91	2.17	2.24
Offals	1.31	1.32	1.19	1.18	1.16
Sausages, uncooked	3.68	3.74	3.64	3.65	3.57
Other meat products:					
meat pies	0.77	0.77	0.74	0.72	0.83
other	2.03	2.33	2.26	2.02	2.22
Fish, fresh and processed	3.73	3.67	3.66	3.53	3.37
Canned fish	0.79	0.69	0.69	0.70	0.72
Fish and fish products, quick-frozen	0.94	0.99	1.00	0.87	0.97
Fresh green vegetables	12.25	13.12	16.03	12.57	16.66
Other fresh vegetables	10.01	9.95	10.14	8.18	9.90
Quick-frozen vegetables	1.74	1.74	1.48	2.08	1.62
Canned peas	3.10	3.20	3.02	2.98	2.74
Canned beans	3.58	3.86	3.71	3.41	3.63
Potatoes: purchases	45.59	48.24	43.14	43.01	40.08
consumption	49.31	51.84	49.22	44.40	46.15
Citrus fruit	5.12	5.01	3.33	7.03	3.55
Bananas	3.46	2.99	3.09	3.16	3.51
Apples	6.72	7.32	7.65	6.87	7.25
Fresh tomatoes	4.10	4.00	6.43	4.40	6.02
All other fresh fruit	3.82	3.82	7.18	2.81	7.15
Canned fruit	5.70	5.43	5.27	5.61	5.59
Dried fruit, nuts and fruit and nut products	1.23	1.17	0.82	0.86	0.99
Flour	5.38	5.68	5.40	5.16	5.18
White bread	32.01	32.23	33.60	30.26	30.57
Brown, wholewheat and wholemeat bread	2.96	2.92	3.10	3.30	2.87
Other bread	2.77	2.96	2.77	2.90	2.80
Buns, scones and teacakes	1.28	1.21	1.01	1.46	1.15
Cakes and pastries	4.58	4.47	4.32	4.11	3.99
Chocolate biscuits	1.04	0.98	0.95	1.06	0.88
Other biscuits	4.77	4.78	4.66	4.88	4.93
Breakfast cereals	2.63	2.74	2.91	2.74	2.89
Oatmeal and oat products	0.54	0.50	0.23	0.45	0.26
Canned milk puddings	1.52	1.69	1.62	1.68	1.65
Tea	2.52	2.59	2.46	2.38	2.31
Instant coffee	0.38	0.42	0.43	0.42	0.39
Canned soups	3.19	3.54	2.64	2.38	2.65
Pickles and sauces	1.44	1.55	1.55	1.61	1.39

(a) Except where otherwise stated.

Source: Ministry of Agriculture, Fisheries and Food.

potatoes were about 9 per cent lower than in the third quarter of 1970 and purchases were lower by about 7 per cent. Average expenditure on fresh potatoes was 5.1p per person per week and that on potato products (such as chips, crisps, instant potato and canned potatoes, but excluding quick-frozen products) was 2.5p. Purchases of most kinds of fresh fruit increased but consumption was slightly lower than the previous year principally because of smaller supplies of apples and tomatoes from gardens and allotments. There was also some increase in purchases of canned fruit and of dried fruit.

The average quantity of bread purchased showed little change between the second and third quarters and continued to be appreciably below the previous year's level. The fall in the consumption of cakes and pastries also continued, but there was little change in purchases of other kinds of cereal products. Purchases of tea and of instant coffee were rather below the levels of the previous quarter and the third quarter of 1970.

Table 2 shows the extent to which recommended intakes of energy and nutrients were met by the average household and by larger families during the most recent 12-monthly period, with comparable estimates for 1968-70. There was a slight decrease in the intake of energy and of several nutrients but the intake of nutrients remained above recommended levels (except for vitamin D) for all income groups and family sizes.

General index of retail prices for November

THE Department of Employment announce that the official index figure which measures changes in the average level of retail prices was 157.3 on November 16, 1971. This compares with 156.4 on October 19, 1971 and with 100.0 at the base-date, which was January 16, 1962.

The rise in the index during the month was due to higher prices for eggs, many articles of clothing and some other goods and services.

Trends in retail prices

There has recently been increasing interest in methods of allowing for seasonal variations in the index of retail prices, in order to detect changes in the underlying trend of prices.

There are difficulties in applying the standard methods of seasonal adjustment to this particular series. However, seasonal movements in the index are due largely to a few well-identified items of 'seasonal food', ie those items of food the prices of which show significant seasonal variations. These items account for only about 5 per cent of total retail expenditure. If the variation caused by these few items is removed, the underlying trend of the figures can be seen more clearly.

An index of the average prices of 'seasonal food' has been published regularly in Table 132 of the *Department of Employment Gazette* and this has now been supplemented by a corresponding index for 'all items except seasonal food' (see column 11 on page 1084 of the November 1971 issue).

The index for 'all items except seasonal food' on November 16, 1971 was 157.6. This compares with 157.0 at October 19, 1971 and with 100.0 at the base-date, which was January 16, 1962.

The index for 'all items except seasonal food' is not intended as a substitute for the 'all items' index, but as an aid to the interpretation of the movement of that index.

The first annual luncheon of the British Food Export Council was held in London recently after the annual general meeting. Reconstituted 12 months ago, the Council was able to report a successful year of promotional activities and announce an enlarged programme for 1972 covering promotions in 20 countries. Seen here (left to right) are: Sir Basil Engholm, Permanent Secretary to Ministry of Agriculture, Fisheries and Food; Mr. W. P. Bowman, Chairman of British Food Export Council; Mr. J. M. L. Prior, Minister of Agriculture, Fisheries and Food; Sir James Barker, President of British Food Export Council, Major-General I. S. Harrison, Director General of British Food Export Council.

'Economic Progress Report' for January 1972

THE January issue of *Economic Progress Report* was published on December 21, 1971. It contains articles on economic subjects, analysing or giving background to Government economic policy, together with the Treasury's assessment of the economic situation and a table and charts of economic indicators.

The main articles in the January issue are: Public expenditure to 1975-76; Credit for house purchase; Monthly economic assessment; Economic indicators.

Patent Office publications for industry

The Patent Office offers industry a wide range of publications. These include the Official Journal (Patents) the Trade Marks Journal, British Patent Specifications, Illustrated Abridgements of Patent Specifications, Reports of Patent, Design and Trade Mark Cases, and 50-year subject matter file lists of British Patent Specifications. Details of these and other publications may be obtained by post from Sale Branch, the Patent Office, Orpington, Kent, BR5 3RD or by personal application at the Public Sale Counter of the Patent Office, 25 Southampton Buildings, London, W.C.2

Registrations of British and foreign films

The following are details of films registered by the Department of Trade and Industry under the Films Acts 1960 to 1970 during the week ended Friday, December 24, 1971. BR/E indicates that the film is a British quota film

Title of film	Registered No.	Playing time minutes	Date of registration	Registered in the name of	Maker's name
			BRITISH		
The Evolution Bit	BR/E 35858/25/12/76	24	December 21	United Artists Corporation Ltd.	Harold Baim Motion Picture Productions Ltd.
Mr. Forbush and the Penguins	BR/E 35863/25/12/76	102	December 21	British Lion Films Ltd.	EMI Film Productions Ltd.
Movietone News 2220	BR/E 35609/25/12/76	7	December 24	Twentieth Century-Fox Film Co. Ltd.	British Movietonews Ltd.
Movietone News 2220A	BR/E 35610/25/12/76	7	December 24	Twentieth Century-Fox Film Co. Ltd.	British Movietonews Ltd.
			FOREIGN		
Song of Norway	F 35859	143	December 21	Cinerama Releasing (UK) Ltd.	ABC Picture Corporation
Midsummer Sex	F 35860	63	December 21	Miracle Films Ltd.	P. G. Linden, Stockholm
Dead Sexy	F 35861	76	December 21	Miracle Films Ltd.	Transocean International, Munich
Sixty Nine	F 35862	95	December 21	Miracle Films Ltd.	Omega Nordisk Film, Stockholm
Something Big	F 35864	108	December 21	Twentieth Century-Fox Film Co. Ltd.	Cinema Center Films

Hosiery and other knitted goods—index of production

In the three months ended October 1971, the volume of production of hosiery and other knitted goods (including knitted fabrics) was provisionally estimated to have been 5 per cent less than in the three months ended July 1971.

The above comparison has been based on the seasonally adjusted figures in the accompanying table.

The seasonally adjusted figures for 1971 are based on the seasonal pattern up to the end of 1970 and may be subject to slight revision when the complete figures for 1971 have been incorporated.

The actual figures allow for differences in the lengths of calendar months, but not for holidays or other seasonal variations.

A short note on the construction of the index was given in the *Board of Trade Journal*, dated May 27, 1970 (page 1455).

1963 = 100

1964		109	
1965		114	
1966		114	
1967		114	
1968		132	
1969		147	
1970		149	
		Actual	Seasonally adjusted
1969	1st quarter	133	143
	2nd quarter	145	153
	3rd quarter	142	144
	4th quarter	166	147
1970	1st quarter	138	153
	2nd quarter	143	146
	3rd quarter	144	146
	4th quarter	170	151
1971	1st quarter p	135	145
	2nd quarter p	147	154
	3rd quarter p	148	150
1970	April	140	141
	May	135	151
	June	155	147
	July	127	141
	August	140	154
	September	166	144
	October	184	153
	November	184	151
	December	144	149
1971	January p	126	153
	February p	137	140
	March p	142	142
	April p	138	153
	May p	151	165
	June p	152	143
	July p	142	158
	August p	134	148
	September p	166	144
	October p	182	151

Production in the cotton industry

The volume of production in the cotton industry (including the processing of man-made continuous filament yarns and finishing) in September 1971 was 2 per cent less than in September 1970.

Statistics issued by the Textile Council show that in the nine months January-September the amount of cloth woven was 7 per cent less than in the corresponding period of last year. Production of single yarn was 7 per cent less and the amount of yarn doubled 15 per cent less.

PRODUCTION IN THE COTTON INDUSTRY

Annual totals and weekly averages

		Single yarn(†)		Doubled yarn		Processed filament yarn	Woven cloth	
		Cotton yarn (‡)	Spun man-made yarns and mixture yarn, inc. waste	Cotton yarn	Other	Textured yarn (§)	Cotton	Man-made fibre and mixtures
		Million lb.					Million lin. yards	
1963		488.7	127.0	131.4	107.0	..	1,014.1	560.3
1964		508.1	145.9	136.1	120.0	40.7	1,033.1	610.1
1965		484.8	142.5	131.5	120.3	47.5	1,015.0	624.4
1966		455.7	136.2	123.1	110.2	62.2	915.3	616.6
1967		383.8	124.8	108.1	105.2	78.4	745.0	529.8
1968		377.4	148.7	110.0	114.6	113.6	730.7	554.8
1969		366.4	161.3	103.2	134.3	150.5	723.4	588.5
1970		349.8	170.7	95.2	126.3	181.7	686.4	529.6
1970	July	6.0	2.8	1.6	2.2	2.9	7.9	7.2
	August	7.1	3.5	1.8	2.6	3.2	13.5	10.0
	September*	6.2	2.9	1.6	2.3	3.5	11.8	9.2
	October	7.5	3.6	2.0	2.7	4.2	14.3	11.1
	November	7.5	3.8	2.0	2.6	4.6	14.1	11.1
	December*	5.7	3.1	1.5	1.9	3.7	11.5	8.8
1971	January	7.1	3.9	1.9	2.4	4.4	13.5	11.1
	February	6.7	4.0	1.9	2.4	4.5	13.3	11.1
	March*	6.5	3.9	1.7	2.3	4.3	13.0	10.7
	April	5.2	3.4	1.6	1.9	4.1	11.1	9.3
	May	6.4	4.0	1.8	2.4	4.3	12.7	11.1
	June*	4.8	3.1	1.4	1.7	3.8	11.7	9.7
	July	4.8	2.9		**3.4	3.4	7.3	7.4
	August	5.6	3.7		3.5	3.6	12.0	10.2
	September*	4.8	3.2		2.9	3.8	10.8	9.1

(†) Spun in the cotton industry. (‡) Including yarns wholly of cotton waste and mixture yarn of cotton and cotton waste. (§) Deliveries. ** Can no longer be shown separately.

UNIVERSITY OF CAMBRIDGE DEPARTMENT OF APPLIED ECONOMICS OCCASIONAL PAPER 28

Economies of Scale in Manufacturing Industries

C. F. PRATTEN

The final report of the department's study of economies of scale in manufacturing industries. It describes the economies of scale in 25 industries, including chemicals, synthetic fibres, motor vehicles, machine tools and cotton textiles. It compares the structure of industries in the U.S.A. and the U.K. **Paperback £3.40 net**

CAMBRIDGE UNIVERSITY PRESS

INDIA

Bombay Market

Published fortnightly. Circ. 12,000. Advertising Rates: Pg. Rs. 300; ½ Pg. Rs. 170; ¼ Pg. Rs. 90. Type area 11 in. x 7 in. Single copy R. 3.

DIRECTORIES, WHO'S WHO PRESS GUIDES & YEAR BOOK
£1.50 plus Post 15p.

PUBLISHING & DISTRIBUTING CO. LTD.,
177, REGENT STREET, LONDON, W.1
Tel.: 01-734 6534/5 Telex WESTCHAM LONDON 268312/PUBDISCO

Output of the wool textile industry

THE volume of production in the wool textile industry in September 1971 was 6 per cent less than in September 1970.

Statistics issued by the Wool Industry Bureau of Statistics show that in the nine months January-September deliveries of woven fabrics (excluding blankets) were 13 per cent less than in the corresponding period of 1970, and deliveries of worsted yarn (excluding semi-worsted yarn) were 7 per cent less.

Production of wool and hair tops was 20 per cent less and of man-made fibre tops 24 per cent less.

OUTPUT OF THE WOOL TEXTILE INDUSTRY

	Consumption	Production			Deliveries			
	Raw Wool (Clean weight)	Tops		Woollen Yarn (†)	Worsted Yarn (§)	Woven Fabrics (excluding blankets) (‡)		Blankets (†)
		Wool and Hair	Man-made Fibres			Woollen	Worsted	
	Million kilos					Million sq. yds.		
1963	207.7	137.9	19.1	142.0	108.7	176.8	148.6	35.1
1964	189.7	120.3	25.8	147.8	105.8	177.1	148.3	32.9
1965	182.6	112.3	25.9	146.0	103.2	175.3	147.6	32.8
1966	176.1	104.2	28.5	142.7	100.2	168.4	133.9	30.5
1967	163.3	92.1	27.6	138.1	89.6	163.2	131.3	28.7
1968	177.5	96.6	36.4	147.4	98.2	162.4	132.3	32.7
1969	174.5	92.0	42.2	142.2	100.5	155.6	130.6	32.2
1970	153.1	79.7	44.6	129.4	97.6	138.1	119.3	29.4
1970 1st quarter	41.8	22.5	11.2	33.7	24.5	33.3	31.0	7.5
2nd quarter	41.7	22.2	11.5	33.5	26.1	36.8	31.1	6.3
3rd quarter	32.8	17.5	10.5	27.9	21.9	33.8	26.5	6.9
4th quarter	36.8	17.6	11.3	34.3	25.0	34.3	30.8	8.6
1971 1st quarter	37.4	17.7	8.4	35.4	23.6	30.0	27.4	9.1
2nd quarter	37.4	17.1	8.7	34.9	23.8	33.1	24.5	7.4
3rd quarter	30.4	15.0	8.4	27.2	21.6	29.3	22.5	8.1
1970 July	12.2	7.2	4.1	9.0	8.1	11.4	9.0	1.7
August	9.0	4.2	2.6	8.3	5.8	10.5	7.2	2.2
September	11.6	6.0	3.8	10.6	8.0	11.9	10.3	3.0
October	12.1	5.7	4.3	11.7	8.9	12.4	10.8	3.4
November	12.9	6.2	4.1	11.7	8.4	11.8	10.6	2.6
December	11.8	5.6	3.0	11.0	7.7	10.1	9.5	2.6
1971 January	12.0	5.6	2.8	11.2	7.4	10.2	9.2	3.2
February	11.7	5.6	2.7	11.2	7.6	9.5	8.5	2.9
March	13.7	6.5	2.9	13.1	8.6	10.2	9.7	3.0
April	12.2	5.7	2.7	11.5	7.7	9.9	8.1	2.9
May	13.1	6.1	3.2	11.9	7.9	11.9	8.3	2.1
June	12.1	5.4	2.8	11.5	8.2	11.2	8.1	2.5
July	10.2	5.4	3.0	8.5	7.1	9.9	7.5	2.5
August	8.9	4.1	2.3	8.4	6.3	9.4	6.5	3.0
September	11.3	5.5	3.1	10.3	8.2	10.1	8.5	2.6

(†) Estimated. (‡) Woven woollen fabrics include fabrics which are mainly woollen by weight of components and, similarly, woven worsted fabrics include fabrics which are mainly worsted by weight of components. (§) From January 1969 includes semi-worsted yarn; previously yarn of this type was not separately distinguished and the small quantities involved were divided between the woollen and worsted yarn headings. In September deliveries of semi-worsted yarn were 0.8 million kilos.

EXPORTS OF WOOL TEXTILE PRODUCTS

	Total	Wool tops		Yarns		Woven fabrics (‡)		Other wool textile products†
	£m.	£m.	Mn. lb.	£m.	Mn. lb.	£m.	Mn. sq. yd.	£m.
1963	130.87	42.82	96.01	21.27	33.87	63.77	89.26	3.00
1964	131.82	38.39	75.15	22.09	32.12	67.23	89.42	4.11
1965	122.07	28.98	64.00	20.51	30.20	68.00	88.78	4.59
1966	116.29	28.68	62.66	20.06	29.50	63.86	81.18	3.69
1967	103.79	22.54	51.41	18.04	27.70	59.84	75.64	3.37
1968	114.80	23.94	56.08	20.44	31.62	66.14	83.03	4.28
1969	125.41	26.55	57.35	23.32	35.45	71.08	83.07	4.45
1970	117.25	20.38	46.47	23.37	34.94	70.00	74.76	3.50
1969 1st quarter	28.13	6.05	13.37	5.39	8.28	15.69	19.10	1.00
2nd quarter	33.24	7.92	17.00	5.95	8.89	18.33	21.12	1.05
3rd quarter	32.52	6.85	14.40	5.94	8.91	18.54	21.84	1.20
4th quarter	31.52	5.73	12.59	6.06	9.36	18.53	21.02	1.20
1970 1st quarter	28.94	5.49	12.45	6.01	8.93	16.59	18.78	0.85
2nd quarter	30.81	5.73	12.83	6.35	9.61	17.94	18.96	0.79
3rd quarter	28.84	5.33	11.90	5.26	7.80	17.46	18.42	0.80
4th quarter	28.66	3.82	9.30	5.75	8.61	18.03	18.59	1.06
1971 1st quarter	23.30	4.04	9.71	5.21	7.71	13.18	13.87	0.87
2nd quarter	29.43	4.32	10.69	6.44	10.17	17.42	17.15	1.25
3rd quarter	26.21	4.12	10.46	5.37	7.81	15.45	16.86	1.27

(†) Wool or other animal hair, carded or combed; felts, wholly or partly of wool; blankets: travelling rugs; woollen and worsted fents; and other made-up textile articles, not individually specified in the Export List, of sheeps' or lambs' wool or fine animal hair.

Other commodities of, or containing, wool or animal hair not included in the above table; sheeps' or lambs' wool and fine or coarse animal hair not carded or combed; noils, rags and other waste; carpets; garments; smallwares; knitted or crocheted fabrics; woven fabrics predominantly of man-made fibres containing sheeps' or lambs' wool or fine animal hair.

(‡) Excluding mechanical cloths from January 1970.

Release dates of economic statistics to be published in January 1972

THIS notice is issued by the Central Statistical Office on behalf of the Government Statistical Service and other organisations as a guide to the dates of publication of major economic series in January. The dates are those which Departments, or other organisations concerned, are aiming at, and would normally expect to meet. Exceptionally, there may be a delay resulting from unavoidable statistical problems of collection and compilation. Further inquiries about individual series should be addressed to the source named.

Publication date	Series	Method of release*	Source
January			
3 Mon	Car and commercial vehicle production (Nov)	PN	DTI
4 Tues	UK Official reserves (Dec)	PN	Treasury
	Weekly fuel statement	PN	DTI
5 Wed	Borrowing by local authorities (3rd qtr)	PN	CSO
	Central Government borrowing requirement (Nov)	Fin Stats	CSO/Treasury
	Numbers of foreign visitors to Britain (Nov)	PN	DTI
6 Thurs	Consolidated Fund and National Loans Fund (Dec)	London Gazette	Treasury
7 Fri	National Income and Expenditure (3rd qtr—revised)	PN	CSO
10 Mon	Hire purchase and other instalment credit business (Nov)	N	DTI
	Retail trade (Nov)	PN	DTI
	Investment intentions of the manufacturing, distributive and service industries for 1972	PN	DTI
	Weekly fuel statement	PN	DTI
13 Thurs	Appropriation account of companies (3rd qtr)	PN	CSO
	Net acquisition of financial assets—analysis by Sector (3rd qtr)	PN	CSO
	Financial accounts of industrial and commercial company and personal sectors (3rd qtr)	PN	CSO
	Capital expenditure by the manufacturing, distributive and service industries (3rd qtr—revised)	T & I	DTI
	Manufacturers' and Distributors' stocks (3rd qtr—revised)	T & I	DTI
	United Kingdom overseas trade (Dec)	PN	DTI
	Wholesale price index numbers (Dec)	PN	DTI
	Weekly fuel statement	PN	DTI
14 Fri	Building Societies receipts and loans (Dec)	PN	BSA
	Crude steel production (Dec)	PN	BSC/BISPA
17 Mon	Index of industrial production (Nov)	PN	CSO
	Turnover of the motor trades (Nov)	PN	DTI
	Turnover of the catering and service trades (Nov)	PN	DTI
18 Tues	Consumers Expenditure (4th qtr—1st preliminary estimate)	PN	CSO
	Weekly fuel statement	PN	DTI
20 Thurs	Registered unemployed (prov—Jan)	PN	Dept of Emp
	Unfilled vacancies (Jan)	PN	Dept of Emp
	Basic rates of wages and normal weekly hours (end Dec) (E)	PN	Dept of Emp
	Monthly index of average earnings (Nov) (E)	PN	Dept of Emp
21 Fri	New vehicle registration (Dec)	PN	Dept of Environment
22 Sat	Retail price index (Dec)	PN	Dept of Emp
23 Sun	National savings monthly progress report (Dec)	PN	DNS
24 Mon	Engineering industries deliveries and orders (Nov)	PN	DTI
25 Tues	Construction—new orders (Nov)	PN	Dept of Environment
	Weekly fuel statement	PN	DTI
26 Wed	Central Government borrowing requirement (Dec)	Fin Stats	CSO/Treasury
	Capital issues and redemptions (Dec)	Fin Stats	Bank of England
	Bricks and cement production (Dec)	PN	Dept of Environment
	Electricity generation (Dec)	PN	DTI
27 Thurs	Stoppages of work due to industrial disputes (Dec)	Gazette	Dept of Emp
	Registered unemployed (final figures—Dec)	Gazette	Dept of Emp
	Employment in production industries (Nov)	Gazette	Dept of Emp
	Overtime and short-time working in manufacturing industries (Nov)	Gazette	Dept of Emp
31 Mon	Car and commercial vehicle production (Dec)	PN	DTI
	Housing starts and completions (Dec)	PN	Dept of Environment
	House improvement grants (Dec)	PN	Dept of Environment

* PN = Press Notice

Business Monitor

THE following titles and issues of Business Monitor are now available and copies may be obtained by annual subscription from HMSO, PO Box 569, London, SE1 9NH.

Production series

Monthly at £1 a year post free:
Wood chipboard for October
Radios, television sets and sound reproducing apparatus for September.

Quarterly at 37½p a year post free:
Bedding and soft furnishing for second quarter
Manufactured stationery for first quarter
Hearing aids for third quarter.

Civil aviation series

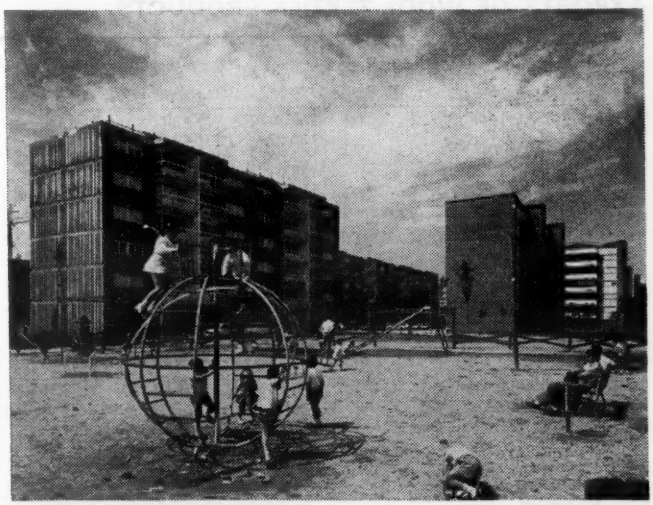
Monthly at £1 a year post free:
Airline operations for July and August.

Quarterly at £2.50 a year post free:
Airline operations for second quarter.

Miscellaneous series

Quarterly at 37½p a year post free:
Insurance companies' and private pension funds' investment for third quarter.

A complete list of titles of Business Monitors was last published in *Trade and Industry* on December 16 on page 562.



***Storiform**, the method of system building developed by the Laing Group in the UK, is now being used for a Spanish housing project by the member company Laing Iberica S.A. The £6-million project is the largest of its kind to be undertaken by the company and will provide 4,500 low-priced flats over seven years at Santa Perpetua de Moguda, near Barcelona.*

TRADE PROMOTION
MISSIONS and TOURS

Mission's success in Romania

'A BREAKTHROUGH for British plastics' is expected by Mr. S. R. Badley, leader of the British Plastics Federation's trade mission which returned recently from Romania. 'We have come back with a Romanian shopping list which could bring between £3 million and £5 million to Britain,' he said.

The mission's visits to three major processing plants and the ensuing discussions produced a most valuable exchange of ideas on machinery, materials and techniques. The Romanians' particular interests are in machines for packaging, extrusion, blow-moulding, injection-moulding and ancillary equipment; they put great emphasis on growth in packaging and building.

The mission was honoured by an interview with the Minister for the Chemical Industry, Mr. M. Florescu, who described recent developments in the Romanian plastics industry, including ultra-high-density polyethylene, produced by Dr. Niletescu after 10 years of research.

Long-term estimates of Romania's plastics production (currently 250,000 tons/year) give a ten-fold increase in the use of machines during the next 10 years, and Romanians hope to see a good range of British Machinery at the Exhibition of Equipment for the Oil, Chemical, Plastics and Rubber Industries at Bucharest in May next year.

Welcome 'in lights'

MR. GYOTA MACHIDA, president of the Tokyo import/export merchants Kanematsu-Gosho, must surely be the first visiting executive from any country to see his name in lights in London. He came to London recently to introduce the company's newly appointed general manager for London and Europe, Mr. Shoe Kamijo, to clients here. The introduction was made at a cocktail party at Claridges Hotel, London.

To mark the occasion, Mr. John Haffenden, the whisky broker and blender, arranged for a message of welcome to be displayed on the illuminated Newscaster above the Swiss Centre in London's Leicester Square. The message was repeated every eight minutes throughout a 12-hour period.

Paper presented in Middle East

MR. CECIL RHODES, director and manager, Process Plant Division, Aiton & Co. Ltd., Derby (Whessoe Group) recently presented a paper at a desalination symposium held in Cairo. Mr. Rhodes, a consultant to the United Nations and a world authority on desalination matters, presented a paper entitled 'The Advantages of Mechanical Compression Distillation Plant'. He was one of four British contributors to the conference, among them being Mr. R. J. Hawes of the United Kingdom Atomic Energy Authority, who gave a paper entitled 'Multiple-Effect Evaporation'; Mr. Keith Mills, design manager of the Aiton Process Plant Division, was co-author of this paper.

The symposium was opened by the General Secretary of the League of Arab States, and Prince Mohamed Al Faisal of Saudi Arabia was elected president of the symposium. Mr. Rhodes and other Aiton personnel had the pleasure of showing the Prince examples of Aiton commercial desalination plant installations at Canvey Island, Essex, when their prototype compression plant was in operation there.

Aiton, who have a joint collaborative agreement to develop desalination plants with the UKAEA, recently received an order from British Petroleum Ltd. for a skid-mounted, compression-type distillation plant which will go into service later this year in Libya.

On his return from the UAR, Mr. Rhodes visited Cyprus to have talks with various authorities concerned with future developments necessary to match water supply and water demand.

Visitors from Finland

AMONG recent visitors to the Hyde Group of ICI Paints Division was a party of nine Finns representing the Finnish Industries Association, the Finnish National Council of Nature Conservation, and the National Board of Works, as well as the country's chemical and woodworking industries. The Finnish Co-ordinator in Pollution—European Technical Co-operation, was also in the delegation.

During its visit to the Hyde, Cheshire, location, the party was shown a film illustrating the growing use of 'Flocor', the plastics biological filter treatment medium, in solving industrial and municipal effluent problems around the world.

A session then followed during which Mr. T. R. Roxby, manager, Special Products Group, assisted by two of the 'Flocor' technical team, dealt with questions.

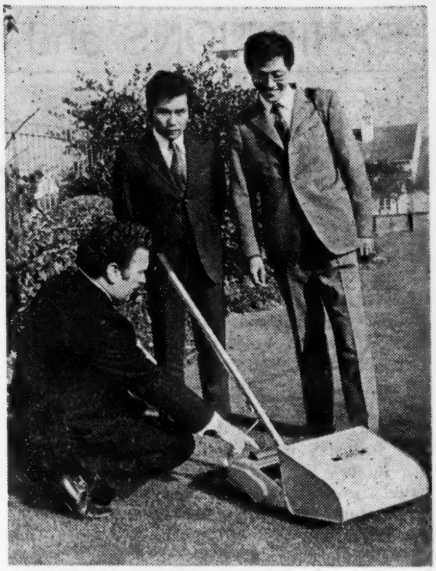
Nigerian opportunities

A TRADE MISSION organised by The Merseyside Chamber of Commerce and Industry returned recently from an 11-day visit to Nigeria. The mission was led by Mr. Peter Earlam, a director of Elder Dempster Lines Ltd., and the secretary to the mission was Mr. C. P. Mercier, overseas trade secretary of The Merseyside Chamber of Commerce.

The 11 other members represented a wide variety of industries and services, including mattresses, industrial fasteners and pressings, lubricants, garage equipment, office equipment, pharmaceuticals, PVC compounds, and stainless steel and vitreous enamel baths and sinks.

The mission was based in Lagos but individual members were able to visit other centres in other states. Some useful meetings were also held with senior government and port officials, Lagos Chamber of Commerce, and important business men.

Although it is too early yet to put a capital figure on the business concluded by the mission during the visit, a great deal was achieved, not least by the valuable contacts made and the opportunities offered by the visit to resolve various problems and difficulties; one member cheerfully reported that as a result he had effected more sales in four days than in the whole of the preceding 12 months, while another member said he was now confidently expecting to double his exports to Nigeria.



Qualcast (Lawn Mowers) Ltd., a member of the Birmid Qualcast (Home and Garden Equipment) Division, recently received an order from Japan worth £30,000 for power mowers made at their Derby works. Mr. Alan Muir of Birmid Qualcast Export Sales, who arranged the successful transaction, is shown (left) emphasising the features of the new Qualcast 300E mains electric cylinder mower to representatives of the Japanese Purchasing House, Mr. M. Nojima (centre) and his colleague Mr. M. Honda, during their recent visit to Derby.

Buyers from Japan

A PARTY of 10 Japanese buyers will visit the 18th International Hardware Trades Fair, to be held in the Grand, National and West Halls, Olympia, London, from January 24 to 28. Their visit is being organised by the Matsuya-Aco Department Stores Group of Japan and they wish to appraise giftware, china and glass, household wares, kitchen and table-top utensils, and decorative accessories.

Fifty-two Danish hardware retailers and buyers will also visit the Fair, on January 24 and 25, and will attend a cocktail reception as guests of the organisers, Universal Exhibitions Ltd.

A LIBRARY FOR EXPORTERS

Foreign trade statistics and other economic statistics from almost every country in the world are available for reference in the Department of Trade and Industry Statistics and Market Intelligence Library at Export House, 50 Ludgate Hill, London, EC4M 7HU. A modern well-equipped library of over 85,000 volumes, it has a reading room for visitors, and provides a document-copying service. There are trade directories covering 150 countries, and an expanding collection of trade catalogues of overseas manufacturers. The library opens from 9 to 5.30, Mondays to Fridays (Tel. 01-248 5757, Ext. 368 or Telex No. 886143).

Coastguards in old-time uniforms at Boat Show

COASTGUARDS manning the Coastguard stand at this year's International Boat Show will be dressed in the uniform of 150 years ago. The service was formed in 1822 and celebrates its 150th anniversary on January 15, 1972.

The HM Coastguard/Department of Trade and Industry stand includes a panel giving the history of the force and a contrasting panel shows the modern equipment, including helicopters, with which the Coastguard carries out his work of co-ordinating marine search and rescue.

Additional features are three screens, equipped with headphones, showing short films on Coastguard and marine safety subjects, and an illuminated display, with telephones, so that visitors to the stand can see and hear what happens when they 'dial 999 and ask for the Coastguard'. A separate display of personal life-saving aids for yachtsmen is featured, and other panels deal with helicopter rescue techniques, the Sea-going Auxiliary Coastguard Scheme, Coastguard links with other rescue organisations, and Department of Trade and Industry Yachtsmaster Certificates.

A further panel is devoted to the work of the Department of Trade and Industry Support Vessel 'Miranda', which will be on station in the north of Iceland this winter to provide weather advice and a medical service to trawlers in the area. This operation was carried out by 'Miranda' last winter and by 'Orsino' in the previous two winters. Operational control of 'Miranda' is under HM Coastguard with a Coastguard officer in command.

Leaflets on HM Coastguard and recommended safety equipment for yachtsmen will be available, whilst Coastguards will be on duty to answer visitors' questions and explain details of the varied types of incidents in which Coastguards are engaged.

The International Boat Show at Earls Court, London is being held from January 4–15.

Scientists from 50 countries for Oceanology 72

THE world assembly of oceanological industries attended by scientists and technologists from more than 50 countries will be held in Britain from March 19-24, 1972. The event—Oceanology International 72—takes place at the Metropole Hotel Exhibition Centre, Brighton, and comprises a major international exhibition and congress concerned with the world-wide exploitation of the sea's resources.

Over 200 leading firms and organisations from 15 national will be demonstrating the latest scientific and industrial achievements in surface/underwater technology. Occupying more than 110,000 square feet (10,000 square metres), the exhibition will feature what is claimed to be the largest array of oceanological equipment, systems and materials ever to be assembled. Several countries—Canada, France, Holland, Japan, the UK and West Germany—will have large, individual national stands of up to 3,500 square feet (330 square metres).

The products and services on show will cover every aspect of oceanology and oceanography—including diving techniques, marine survey work, electronics, telecommunications, undersea mining, gravel extraction, oil and natural gas, fish farming, harbour maintenance, salvage, desalination, anti-pollution measures, and many other seabed and inland waterway interests.

Seaborne displays at Brighton will provide a further major attraction with research vessels from Canada and Russia, the latest type of cable-laying ship from Holland, and various hovercraft equipped with high-speed survey systems. Also offshore will be the Royal Navy's diving training ship HMS 'Reclaim', and members on board will demonstrate advanced diving techniques. Life-saving systems applicable to oil rigs will be seen in action on Brighton Pier.

Latest developments

Daily conferences linking with the exhibition and outdoor displays will deal with the latest scientific, industrial and commercial developments in the field. Among the participating countries presenting national progress reports will be Australia, Belgium, Britain, Canada, Denmark, France, Germany, Holland, India, Italy, Japan, Mexico, New Zealand, Russia, Switzerland and the United States. Altogether, 160 papers will be published.

This event is the second in the series. The first was held at Brighton in 1969 and established on an international level a collective industry for the peaceful exploitation of the sea and the seabed.

The 1972 event, planned on far more extensive lines, will carry the subject of oceanology a stage further under the heading of 'Ocean Management'. The exhibition, organised by BPS Exhibitions Ltd., London, will be one-third larger than the previous show.

Success in Moscow for British firms

From the British Embassy, Moscow

RUSSIAN specialists, technicians, and engineers were much in evidence on the British stands at the Virusologia (Virology) exhibition at the Ivanovsky Institute of Virology in Moscow from November 24 – December 7, and good business was recorded by a number of firms.

Several scientific instrument manufacturers and also one biochemical firm reported considerable interest in their exhibits. They were not only pleased with the immediate orders written, but also with the prospects for future business.

This small specialised show, the last in the 1971 programme of Soviet organised exhibitions, was devoted to instrumentation and equipment, including centrifuges, spectrophotometers, amino-acid analysers, chemical analysis systems and biochemical products used in the field of microbiology.

Ideal platform

Many British firms in the instrumentation field have learned from experience how important participation in such Soviet exhibitions is in their commercial dealings with the USSR. Exhibitions are an ideal platform from which to gain entry into this market, and interested firms are strongly recommended to contact the Fairs and Promotions Branch of the Department of Trade and Industry who will provide details of events. The Commercial Department of the British Embassy in Moscow is also ready to provide further information.

Participation by British firms in this exhibition was organised in the form of a joint venture by the DTI in conjunction with the British Hospital Export Council.

Eleven editors of leading overseas brewing and bottling journals visited the United Kingdom from December 5-8 in connection with BREWEX 72—the International Brewing, Bottling and Allied Trades Exhibition to be held at Earls Court, London, from April 17-21, 1972. During their visit the editors toured the Brewing Industry Research Foundation in Nutfield, Surrey, Allied Breweries (UK) Ltd. and Bass Charrington Ltd. in Burton-upon-Trent, and the Associated British Maltsters plant in Wallingford, Berkshire. They are seen here with executives and officials of ABM (Malting) Ltd. and The Trades' Markets and Exhibitions Ltd., the exhibition organisers, at the Associated British Maltsters plant.

Britain means business

Buyers and exhibitors acclaimed the 17th HTF as the brightest, gayest, most active and valuable Hardware Trades Fair in the International Calendar. The 18th HTF in January 1972 promises even greater action. Nearly 600 important manufacturers from many countries will be exhibiting over 35,000 products (many of them new) designed for equipping and maintaining home and garden. More than 40,000 buyers are expected to visit the fair including some 6,000 from 80 different countries, many as members of buying missions.

If your business is hardware this is the one international event you cannot afford to miss. Write now for a detailed brochure, free admission tickets and details of the travel and hospitality service to

Universal Exhibitions Ltd. P.O. Box 43, High Wycombe, Bucks, England.

18th INTERNATIONAL HARDWARE TRADES FAIR

Jan 24th–28th 1972

Olympia London

NEW ZEALAND

The news travels

"Prime tourist target in Pacific area...greatest expansion potential..."

New Zealand's tourist industry is growing faster than the world rate; with no doubt at all, tourism is quickly taking its place as a vital factor in the economic growth of the country.

Tourist amenities and services are expanding to meet the demand.

Annual tourist figures will reach well over half a million during the next eight years; there was a 30% increase last year alone!

We know, because we are there, deeply involved in New Zealand's development—ready to help you too.

Meanwhile, why not study a copy of the latest edition of our 'Review of the Economic Situation in New Zealand' or our booklet 'Investing in New Zealand'? They are yours for the asking.

Over 200 branches and agencies throughout New Zealand.

The National Bank
OF NEW ZEALAND LIMITED

Our London Address:
8 Moorgate, EC2R 6DB. Telephone: 01-606 8311

EXPORT ORDERS

Beating the freeze-up

An order valued at more than £60,000 left the Cheshire factory of Morgan Refractories Ltd. recently—exactly on the planned date. The consignment, 1,000 tons of Tri-Mor monolithic refractories, had to arrive at Kristinehamn, Sweden, before Lake Vänern froze up for the winter, otherwise a long haul by road would have been entailed (some 50 trucks travelling about 10,000 miles).

So a large fleet of 20-ton trucks transported the palletised refractories from the Neston production plant to Boston Dock and they were loaded on board the *Canopus*, which sailed for Gothenburg on December 16.

Morgan's Tri-Mor distributors, G. & L. Beijer AB of Malmo, have ordered the materials for stock replenishment, but they expect most of it will be used by steelworks in Sweden for relining furnaces.

Processing media sold to Italy

Roto-Finish Ltd., Hemel Hempstead, Herts, has received first orders for its new Osrotron vibratory finishing machine, its new drying Spiratron, and its Frappaz automatic programmed batch transfer plating equipment. In addition, a whole range of processing media totalling 13 tons has been sold to Italy. The company designs and manufactures machinery and processes for mass production finishing of metal and plastics.

The orders result from a recent metal finishing exhibition at the works which was so successful that it is to be permanent. Recent visitors to the exhibition have included members of the Soviet Trade Mission in the UK.

Plant completion in Mexico

Sim-Chem Ltd., Stockport, has completed the engineering, supply of equipment and supervision of erection of the second polyethylene plant in Mexico for Petroleos Mexicanos (Pemex) which uses the ICI high-pressure process. The new plant is sited at Poza Rica and provision has been allowed for further streams in the future.

The commissioning of the first stream of the new plant was successfully carried out by Pemex engineers and coincided with the start-up of a similar plant at Plock in Poland. This latter plant is also the second polyethylene plant completed in Poland by Sim-Chem.

Altogether Sim-Chem (a Simon Engineering company) has now built 22 polyethylene plants throughout the world using the ICI process.

Curtain rings to East Africa

Rufflette Ltd., Manchester, a subsidiary of Thomas French & Sons Group, recently despatched to East Africa an order for over two million 'Rufflette' brand curtain rings—one of the largest export orders for these items received by the company. The order was obtained in the face of strong competition.

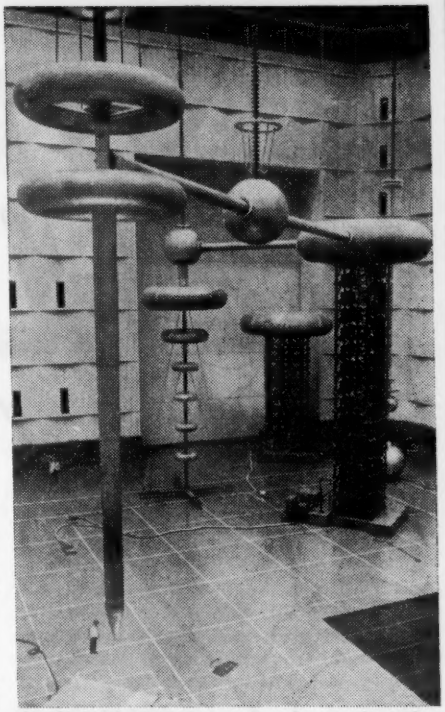
The Thomas French Group has manufacturing or selling subsidiaries in France, Belgium, Germany, South Africa, Australia, New Zealand and Iran, as well as an increasing direct export business from the Manchester head office.

Marine auto-pilot ordered

Their first export order for the recently introduced Ocean series of marine auto-pilots has been won by S. G. Brown Ltd., Watford, Herts, a subsidiary of Hawker Siddeley Dynamics Holdings Ltd. Worth approximately £13,500, the order is from the Holland-America Line and was first negotiated with the help of Brown's agents in Holland, NV Observator.

A twin all-electric auto-pilot system will be supplied through the Dutch shipbuilders, de Merwerde, for a ship now under construction for the Holland-America Line. It includes twin gyros with a changeover facility, three bearing repeaters, two steering repeaters, a course recorder, and a rate-of turn indicator sub-system. It is complemented by the magnetic repeater system, off-course alarm equipment, and other ancillaries to be provided by NV Observator.

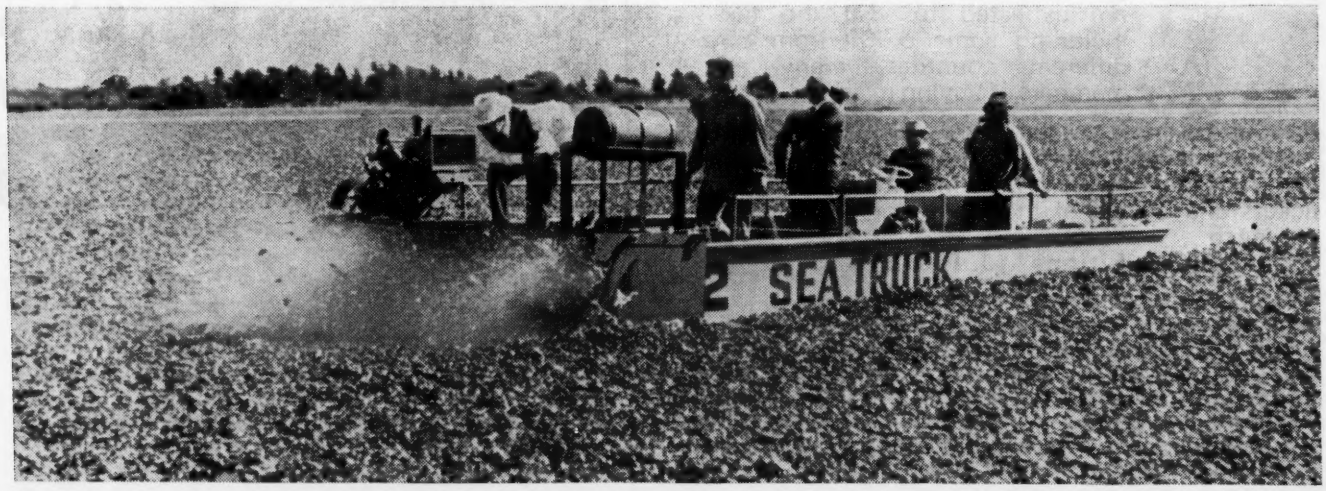
Delivery is scheduled for 1972/73 when the new ship will be made ready for its planned programme of cruises to the Far East.



A Wolverhampton company's product has successfully been applied to the flooring of one of the world's first ultra high voltage testing laboratories recently opened by France's President Pompidou for the Electricite de France. Called Polafloor, the surfacing material, manufactured by Plastics & Resins Ltd., Cleveland Road, Wolverhampton, has been applied under a £7,000 contract carried out by Trills (Builders & Contractors) Ltd., Lewes, Sussex.

REPRINTS OF 'T & I' ARTICLES

Reprints of *Trade and Industry* articles should be ordered within one week of publication from: Director of Publications (P1), HMSO, Atlantic House, Holborn Viaduct, London EC1P 1BN. Reprints cost £3 for 250 copies of a page or part-page, plus 25p for each additional 125 copies; carriage extra.



A British-made Sea Truck has been developed into an effective weapon against the 'suffocation' of reservoirs in South Africa caused by the rapid spread of a floating weed known as water hyacinth. The weeds have buoyant pods which keep them afloat and spread so quickly as to be almost impossible to control. The Sea Truck, pictured here ploughing through a blanket of the weeds on Hartbeespoort Dam near Johannesburg, has been adapted to carry a rotating flail of 96 chains. Like a giant lawnmower, this thrashes back and forth over the blanket of weeds, destroying the buoyant pods, so that the plants sink. Developed by Rotork Group company, Rotork Marine Ltd. of Bath, Somerset, the Sea Truck is a flat-bottomed work boat, not unlike a wartime landing craft, which rides on a 'cushion' of foam generated by its forward movement.

Kennedy Round tariff negotiations, 1964/67

THE final stage of reductions in tariffs under the GATT Kennedy Round of Trade Negotiations is due to be implemented on January 1, 1972. Seven countries involved in the negotiations have already fully implemented the reductions and others merely bound existing rates. Countries still due to make final reductions are shown below. In some cases actual rates for January 1, 1972 are available while for others—ie where the 1972 tariff schedules are not yet to hand—details of the concession rates as published at the end of the GATT Kennedy Round negotiations are available.

AUSTRALIA	Due to be fully implemented—tariff schedules for January 1, 1972, expected shortly. **(EDB Ext. 401/468/469)**
AUSTRIA	Final reductions due January 1, 1972—details of rates available. **(Ext. 460/461)**
CANADA	Final reductions on shoe board (Canadian Tariff Item 19201) will be made on January 1, 1971, and Canada will then have fully implemented Kennedy Round reductions. **(Ext. 455/456/457)**
CHILE	Limited number of items affected. Final reductions due January 1, 1972, tariff schedules not yet received. **(Ext. 474/7312)**
DENMARK	Final reductions due January 1, 1972, details of rates available. **(Ext. 458/459/461)**
EEC	Due to be fully implemented January 1, 1972—details of rates available. Various chemicals and plastics and clocks and watches are eligible for reductions provided certain other countries take specific measures. **(Ext. 466/467/482)**
FINLAND	Final reductions are due on January 1, 1972—tariff schedules not yet received. **(Ext. 458/459/461)**
ISRAEL	Limited number of items affected falling under BN ex 02.01, ex 16.04, ex 25.26, ex 25.26, ex 27.10, ex 40.07, ex 57.07, ex 59.04, ex 59.05, ex 59.06, ex 73.20, and ex 85.01—details of rates available. **(Ext. 420/475)**
KOREA	Due to be fully implemented January 1, 1972—details of rates available. Only items falling under BN ex 48.01 and ex 74.01 are affected. **(Ext. 420/475)**

In many cases further information on the notices published on these pages is available from the Department of Trade and Industry. The main branches concerned are: Commercial Relations and Exports (CRE) Division, DTI, 1 Victoria Street, London SW1H 0ET (Tel: 01-222 7877); and Export Services Division (ESD) and Export Data Branch (EDB), both at DTI, Export House, 50 Ludgate Hill, London EC4M 7HU (Tel: 01-248 5757). In each case, the relevant information source is indicated at the end of the notice by its initials (CRE, ESD or EDB) and the appropriate telephone extension number. In the Tariff and Trade Notices section countries are grouped by continents as far as possible; they are listed alphabetically on the contents page.

NEW ZEALAND	Due to be fully implemented January 1, 1972—details of rates available. **(Ext. 401/468/469)**
NORWAY	Final reductions due January 1, 1972—tariff schedules not yet received. **(Ext. 458/459/461)**
PORTUGAL	Due to be fully implemented January 1, 1972—tariff schedules not yet received. **(Ext. 458/459/461)**
SOUTH AFRICA	Limited number of items included in list of concessions. Final reductions on these due January 1, 1972—tariff schedules not yet received. **(Ext. 471/472/473)**
SPAIN	Due to be fully implemented January 1, 1972, although current duties are often lower than the Kennedy Round concession rates. Tariff schedules not yet received. **(Ext. 462)**
SWEDEN	Further reductions due January 1, 1972—tariff schedules not yet received. **(Ext. 458/459/461)**
SWITZERLAND	Fully implemented except Chapter 91 (clocks and watches) on which the final concession rate has been withheld.
TURKEY	Due to be fully implemented January 1, 1972—details available. Only items falling under BN ex 13.03, 28.21, ex 28.23, ex 28.43, ex 28.56, ex 29.01, ex 29.22, ex 73.16, 84.42, 85.05, 87.12 and ex 90.17 are affected. **(Ext. 420/475)**
USA	Details of the January 1, 1972, rates as scheduled under the Kennedy Round agreement are available. **(Ext. 455/456/457)**
YUGOSLAVIA	Due to be fully implemented January 1, 1972—details of rates available. Only items falling under BN ex 66.01 and ex 84.45 are affected. **(Ext. 420/475)**

Inquirers should state the relevant BN number for their goods where known or alternatively specify the goods in which they are interested.

YOU WILL HAVE NO **CAR SHIPPING PROBLEMS** IF YOU CONTACT
BRITAIN'S LEADING AUTOMOBILE SHIPPERS
INTERCONTI FORWARDING LTD., 14 PHILPOT LANE, LONDON, E.C.3 01-623 6642/3

AMENDMENTS TO THE EFTA CONVENTION CONSEQUENTIAL UPON AMENDMENTS TO THE BRUSSELS NOMENCLATURE: Exporters will wish to know that following decisions by the Customs Co-operation Council, certain amendments to the Brussels Nomenclature and its Explanatory Notes will come into force on January 1, 1972.

These amendments, which improve the clarity and precision of the nomenclature and also cater for certain articles and materials which did not exist when the nomenclature was last revised, will require a number of minor consequential amendments to be made to Schedules I, II and III of Annex B and to Annexes D and E to the EFTA Convention.

Details of these amendments to the Convention, which are mainly textual and consist of a revision of several finished product descriptions and some minor changes to qualifying processes, can be obtained from the EFTA Section.

CRE 3, Ext. 2301/2302

THE EFTA (ORIGIN OF GOODS) (AMENDMENT) REGULATIONS 1971: The EFTA (Origin of Goods) (Amendment) Regulations 1971 (SI 1971 No. 2040) published on December 22, 1971, further amend the EFTA (Origin of Goods) Regulations 1964 (SI 1964 No. 1966). They make a number of changes, which have been agreed in the EFTA Council, in the descriptions of goods and materials and the qualifying processes specified in the Schedules to the 1964 Regulations. The amendments reflect nomenclature changes in the Customs tariff which come into effect on January 1, 1972. Copies of the new Regulations are obtainable from HMSO, 49 High Holborn, London WC1, and branches (price 8p, or by post 10½p).

ECGD BACKS £4½ MILLION CONTRACT FOR SOLVENT EXTRACTION PLANT FOR ZAMBIA: The Export Credits Guarantee Department has signed a Financial Guarantee covering the financing of the major portion of a contract for the construction of a solvent extraction plant, including the supply of capital equipment, to be built at Chingola, Zambia.

The contract, worth about £4½ million, is between Power-Gas Ltd. and Nchanga Consolidated Copper Mines Ltd. of Lusaka. The new plant is being built under Nchanga's long-term expansion programme, and when commissioned during 1974 will considerably increase Zambia's copper production capacity.

A loan of £2.4 million is being made available by Lazard Bsothers & Company Ltd. acting on behalf of a syndicate comprising Barclays Bank, Lloyds Bank and National Westminster Bank, and is repayable over a period of six years.

LEBANON AND SAUDI ARABIA: The French text of the trade agreement recently concluded between Lebanon and Saudi Arabia has been published in the Beirut press. The agreement, which requires ratification by both parties, replaces a previous one concluded in 1967. It is understood that the agreement, which is renewable annually, will provide improved access to the Saudi Arabian market for Lebanese goods, containing as it does much longer lists of products, both agricultural and industrial, which represent Lebanese exports to Saudi Arabia and which may be admitted duty free or at a reduced rate of duty.

EDB Ext. 420/475

TARIFF & TRADE NOTICES

The lists of Tariffs, Customs and Import Regulations changes in overseas countries published in this section of *Trade and Industry* sometimes contain words which are registered trade marks in the United Kingdom. So far as is practicable, all lists of goods are checked before publication from this point of view. Items which fall into this category are preceded by the letters rtm. Readers should note that this prefix signifies that the words are registered as trade marks in the United Kingdom but that in the present context are assumed to refer generally to products of the descriptions stated in brackets. While every attempt will be made to ensure that the scrutiny is complete, the lists may contain other words which are registered as trade marks in the United Kingdom or in other countries but which it has not been possible to identify.

European Communities

COMMON AGRICULTURAL POLICY: The texts of the following Regulations which affect the fisheries and various agricultural sectors in the EEC have been published in the *Journal Officiel des Communautés Européennes*. The French texts of the Regulations may be seen on application.

General

Regulation (CEE) No. 2604/71 relates to the second amendment to Regulation (CEE) No. 1013/71 in so far as it concerns the observance of certain import prices in applying the countervailing charges introduced in the agricultural sector following the monetary measures taken by certain Member States. (*Journal Officiel* No. L269 dated December 8, 1971)

Regulation (CEE) No. 2635/71 modifies the countervailing amounts fixed in the agricultural sector following the temporary widening of the margins of fluctuation in the currencies of certain Member States. (*Journal Officiel* No. L273 dated December 13, 1971)

Tobacco

Regulation (CEE) No. 2602/71 relates to the communication of the data necessary to the application of Regulation (CEE) No. 727/70 establishing a common organisation of the markets in the raw tobacco sector. (*Journal Officiel* No. L269 dated December 8, 1971)

Regulation (CEE) No. 2603/71 relates to the procedures for the settlement of contracts for first processing and preparation of tobaccos held by the intervention agencies. (*Journal Officiel* No. L269 dated December 8, 1971)

Fruit and vegetables

Regulation (CEE) No. 2605/71 rescinds Regulation (CEE) No. 2534/71 applying the Common Customs Tariff to imports of mandarins, satsumas, clementines, tangerines and other similar citrus hybrids originating in Spain. (*Journal Officiel* No. L269 dated December 8, 1971)

Regulation (CEE) No. 2584/71 rescinds Regulation (CEE) No. 2544/71 applying the Common Customs Tariff to imports of mandarins, satsumas, clementines, tangerines and other similar citrus hybrids originating in Turkey. (*Journal Officiel* No. L266 dated December 3, 1971)

Regulation (CEE) No. 2640/71 fixes for the 1971/2 marketing year, the minimum purchase price of oranges delivered to the industry and the amount of the financial compensation after the processing of these oranges. (*Journal Officiel* No. L274 dated December 14, 1971)

Regulation (CEE) No. 2672/71 amends Regulation (CEE) No. 193/70 laying down procedures for applying measures aimed at promoting the marketing of Community oranges and mandarins. (*Journal Officiel* No. L276 dated December 16, 1971)

Milk and milk products

Regulation (CEE) No. 2632/71 amends Regulation (CEE) No. 2227/71 which relates to the levying of an export duty for powdered skimmed milk. (*Journal Officiel* No. L272 dated December 11, 1971)

Fisheries

Regulation (CEE) No. 2633/71 completes Regulations (CEE) Nos. 1821/71 and 1822/71 of August 20, 1971, relating to the import system in the Community for certain fish products originating in Morocco and Tunisia respectively. (*Journal Officiel* No. L272 dated December 11, 1971)

Regulation (CEE) No. 2655/71 fixes for the 1972 marketing year the guidance prices for the fish products listed at Annex I A and C of Regulation (CEE) No. 2142/70. (*Journal Officiel* No. L276 dated December 16, 1971)

Regulation (CEE) No. 2656/71 fixes for the 1972 marketing year, the guidance prices for fish products listed at Annex II of Regulation (CEE) No. 2142/70. (*Journal Officiel* No. L276 dated December 16, 1971)

Regulation (CEE) 2657/71 fixes for the 1972 marketing year, the Community production price for tuna intended for the manufacturing industry. (*Journal Officiel* No. L276 dated December 16, 1971)

Regulation (CEE) No. 2658/71 fixes for the 1972 marketing year, the intervention prices for fresh or frozen sardines and anchovies. (*Journal Officiel* No. L276 dated December 16, 1971)

Regulation (CEE) No. 2670/71 relates to fixing the standard value for fish products withdrawn from the market during the 1972 marketing year and to intervention in the calculation of financial compensation. (*Journal Officiel* No. L276 dated December 16, 1971)

Wines

Regulation (CEE) No. 2659/71 fixes for the period December 16, 1971 to December 15, 1972, the trigger prices in the wine sector. (*Journal Officiel* No. L276 dated December 16, 1971)

Regulation (CEE) No. 2671/71 fixes the reference prices for wines, valid from December 16, 1971 to December 15, 1972.

Oils, fats and oilseeds

Regulation (CEE) No. 2660/71 amends Regulation (CEE) No. 2311/71 relating to aid for olive oil. (*Journal Officiel* No. L276 dated December 16, 1971)

Sugar

Regulation (CEE) No. 2573/71 fixes the basic amount of the import levy on syrups and certain other products of the sugar sector. (*Journal Officiel* No. L265 dated December 2, 1971)

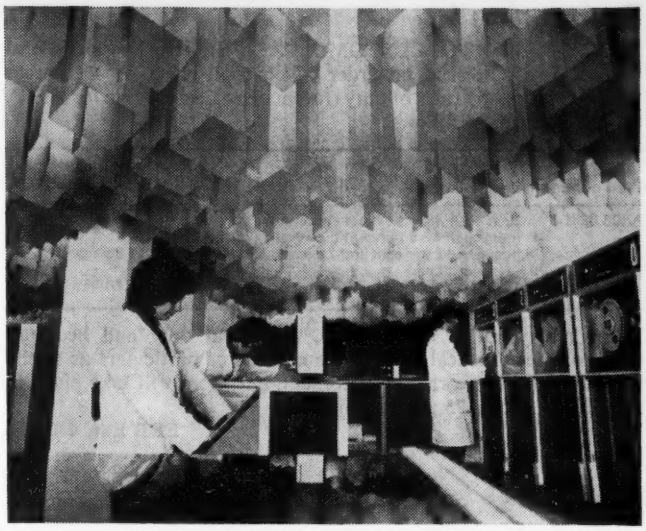
EDB Ext. 7174, 408

UNCTAD GENERALISED PREFERENCES SYSTEM: *Trade and Industry* dated July 22, 1971 contained a notice about Regulations (CEE) Nos. 1308/71, 1310/71 and 1312/71 relating to the opening, allocation and administration of Community tariff quotas for certain products originating in certain developing countries. The *Journal Officiel des Communautés Européennes* No. C122 dated December 10, 1971 contains an announcement that the quota for imports into the EEC of the following goods which was set up by Regulation (CEE) No. 1312/71 has been exhausted. With effect from December 10, 1971 imports into the EEC of the following products originating in Iran will attract the full rate of Customs duty.

ECC Common Customs Tariff	Description of goods
Regulation (CEE) No. 1312/71	
58.01	Carpets, carpeting and rugs, knotted (made up or not): A. of wool or of fine animal hair, containing per linear metre—more than 350 and up to 500 knots, inclusive.

The French texts of the Regulations and announcements referred to above may be seen on application.

EDB Ext. 7174, 408



Scottish-built Honeywell 2015 computer recently installed in the Milan datacentre of Honeywell Information Systems Italia. It is one of four computer systems together worth over £1 million recently exported by Honeywell Information Services Ltd. to Italy. The 'stalactites' suspended from the ceiling of the datacentre are designed to absorb noise from the computer installation.

Portugal

DRAWBACK: PAPER, PAPERBOARD, AND CARDBOARD: Portuguese *Diario do Governo*, First Series, No. 278 of November 26, 1971, published Order 647/71. This authorises the import under drawback, for a period of two years, of paper, paperboard, and cardboard for printing and for graphic work which is for export under the same system after prior consultation with the Inspector-General of Agricultural and Industrial products.

EDB Ext. 460/461

EUROPEAN SALES AND PROMOTION AGENTS

HAMMOND ROYLSTON AND ASSOCIATES.

Start or enlarge your exports to the Common Market.

We handle your complete E.E.C. sales campaign.

We charge **no commission** on orders obtained.

For more facts about this unique service to manufacturers write to:

HAMMOND ROYLSTON & ASSOCIATES. Dept TR.
332 New Hythe Lane, Larkfield, Maidstone, Kent
Telephone Maidstone 77452

DIRECTORIES, WHO'S WHO
PRESS GUIDES & YEAR BOOK
£1.50 plus Post 15p.

ITALY

The Profitable Way to Advertise your offers in

OERI

The International Trade Review in four Languages, published monthly from Turin. Advertising Rates: Page (12 in. x 8¾ in.), £35.25; half-page, £18.90; quarter page, £9.53; Colour plus 10%.

For further details of O.E.R.I., or other Italian publications or advertising in any country, write or telephone: P & D address is 177 Regent Street, London, W.1 Tel.: 734 2361/2

PUBLISHING & DISTRIBUTING CO. LTD.,
177, REGENT STREET, LONDON, W.1
Tel.: 01-734 6534/5 Telex WESTCHAM LONDON 268312/PUBDISCO

Switzerland

AMENDMENT TO CUSTOMS TARIFF: The Swiss Federal Council has published an order which took effect on December 1, 1971, raising the rates of duty (revenue) on beer eligible for EFTA tariff treatment, as follows:

Tariff heading	Description	Rate per hectolitre Sw. frs.
22.03.08/14	Beer with a wort extract content of:	
	more than 13.5 per cent by weight (strong beer)	12.75
	between 12 per cent and 13.5 per cent by weight (special beer)	11.85
	12 per cent or less by weight (normal beer)	11.20

These rates include import duty, additional duty and beer tax (but not the statistical tax). In the absence of particulars as to the type of beer and wort extract content, clearance will take place at rate of Sw. frs. 12.75 per hectolitre.

EDB Ext. 460/461

Israel

TARIFF AMENDMENTS: The Israeli authorities announce the following amendments to Customs Tariffs:

Tariff No.	Description	Rate of duty
04.04.	The following to be inserted after Section 2000:	
3000	Cheese of the Cheddar or Gruyere variety in slices of not less than 20 kg each, if used for the production of molten cheese and it is released before April 1, 1972	Exempt
28.40.3000	'35 per cent' is superseded by	15%
	Item 49.08 is superseded by:	
49.08.	Decalcomanias (transfers)	
1000	of paper in rolls of a width exceeding 70 cm and a length exceeding 200 metres, transferring the colour by pressure and evaporation of the colouring matter, released before January 1, 1973	25% ad val.
9000	Other	50% ad val.
92.13.	The following to be inserted after Section 5000:	
6000	Spools and reels for films	25% ad val.

EDB Ext. 420/475

PLANT PROTECTION REGULATIONS: The Israeli Minister of Agriculture has issued some new regulations under the Plant Protection Law 1956 in respect of the acquisition, sale and use of ethyl parthion. Fuller details are available.

EDB Ext. 420/475

Morocco

IMPORT RESTRICTIONS: It has been reported that in accordance with Notice to Importers No. 112 published in the Moroccan Press on December 10, the following items have been transferred from List A (goods not requiring a licence) to List B (goods requiring a licence) of the General Import Programme.

Tariff Number	Description
84.06.04	Internal combustion engines of 12,000 cc. and under
84.06.33	Stationary internal combustion engines

Both these items are now being imported 'according to need'. This legislation took effect from November 2.

EDB Ext. 420/475

Republic of South Africa

CUSTOMS TARIFF APPLICATION: Customs Tariff Application List No. 543, published in the South African *Government Gazette* of December 17, contains an application to the Board of Trade and Industries for increase in duty on:

1. Textile hosepiping with or without lining, armour or accessories of other materials commonly used for fire fighting from free of duty to 15 per cent *ad valorem*. (Note: The duty applied for was imposed on November 26 as interim protection and the application is now published for general information with a view to further investigation of the matter.)
2. Laundry washing machines with a dry weight loading capacity not exceeding 7 kg. (84.18.25. and 84.40.10.) from 25 per cent *ad valorem* to 25 per cent or R.35.00 per unit, whichever is the greater duty.
3. Liquid impregnated or filled capacitors below a rating of 50 microfarads from 5 per cent (general) and free (UK) to 20 per cent (general) and 15 per cent (UK).
4. Fluxes for submerged arc welding (38.13.90) from 10 per cent to 30 per cent *ad valorem*.

Those British trade organisations thought to be interested in the application are being informed. Any British firm affected which wishes to make representations to the South African Board of Trade and Industries and belongs to a trade organisation should, therefore, first contact its own trade association.

If any firm proposes to make independent representations to the South African authorities and requires further information concerning the application, it should address inquiries to the Commercial Relations and Exports Department.

CRE Ext. 2274

Uganda

IMPORT PROHIBITION (REVOCATION) ORDER: Statutory Instrument No. 168 of 1971 published in the *Uganda Gazette* of December 3 revokes with effect from November 24 the following orders: Statutory Instrument No. 99 of 1968, The External Trade (Imports Prohibition) Order, 1968; Statutory Instrument No. 16 of 1970, The External Trade (Import Prohibition) Order, 1970.

Note: The effect of this revocation order is to allow the importation into Uganda under specific import licence of the following items previously prohibited: Certain dry cell batteries; matches, except book matches; cotton yarn corded or combed of 30 counts and below; grey (unbleached) cotton fabrics of 20 counts and below in either warp or weft; refrigerators (domestic), electrical and non-electrical; certain textile goods under statistical CODE headings 652 and 653.

ESD Ext. 462, 471/472/473

FOR FAST OVERLAND SERVICES Containers, Tankers, Low Loaders, Box, Tilt and Refrigerated T.I.R. Trailers
GROUPAGE & FULL LOADS

TURKEY, IRAN, IRAQ, KUWAIT, SAUDI ARABIA

BAHREIN, ABU DHABI DUBAI, DOHA, LEBANON, SYRIA, JORDAN, AFGHANISTAN, PAKISTAN
GREECE, BULGARIA, YUGOSLAVIA, RUMANIA, HUNGARY, AUSTRIA, CZECHOSLOVAKIA, POLAND, MOSCOW, TRIESTE
Also to: HOLLAND, BELGIUM, GERMANY AND AUSTRIA

ECONOMICAL RATES BY SEA TO BEIRUT, ISTANBUL, ISKENDERUN, LATAKIA, THEN BY ROAD TO MIDDLE EAST
ALSO ROAD TO ISTANBUL THEN AIR TO MIDDLE EAST

TOPKAPI **T.T.T.**

HEAD OFFICE: LONDON, GILLIES STREET, N.W.5. Tel. 01-167 3221 Telex. 267 717
ALSO DAILY GROUPAGE FROM THE REGIONS ON THROUGH RATE

GLASGOW Tel. 041 221 0381. Telex 77174 MANCHESTER Tel. 061 872 5671. Telex 668716
BIRMINGHAM Tel. 021 552 5391. Telex 339080 BRISTOL Tel. 0272 23137. Telex 44129

SIMILAR GROUPAGE SERVICES FROM CONTINENT TO TURKEY & MIDDLE EAST

Australia

TARIFF BOARD INQUIRY ON COMMERCIAL VEHICLES: The Australian Minister for Trade and Industry has referred to the Tariff Board for inquiry and report the question whether assistance should be accorded the production of commercial vehicles, chassis, bodies and components (tariff items 87.01.100, 87.02.100, 87.03 and 87.14.11).

This reference is of Departmental origin. Details of the tariff items under which the above-mentioned goods are dutiable may be obtained from Tariff Section, Export Data Branch, Ext. 468, 469 or 401.

This matter has been reported by the British High Commission in Canberra, which has been asked to notify the Australian authorities at the earliest possible date if any United Kingdom interests propose to tender evidence. In accordance with normal procedure, notification in this instance has to be made to the Australian authorities not later than January 12, 1972. Before this date, therefore, United Kingdom Trade Associations or firms intending to submit evidence to the Tariff Board should so advise the Commercial Relations and Exports Division, quoting reference No. CRE 2761/71.

CRE Ext. 2318/2319

TARIFF BOARD INQUIRY ON LIGHTNING ARRESTORS: The Australian Minister for Trade and Industry has referred to the Tariff Board for inquiry and report the question whether assistance be accorded the production of lightning arrestors (tariff items 85.19.410 and 85.19.430).

This reference has been made as a result of representations by local industry. Details of the tariff items under which the above-mentioned goods are dutiable may be obtained from Tariff Section, Export Data Branch, Ext. 468, 469 or 401.

This matter has been reported by the British High Commission in Canberra, which has been asked to notify the Australian authorities at the earliest possible date if any United Kingdom interests propose to tender evidence. In accordance with normal procedure, notification in this instance has to be made to the Australian authorities not later than January 12, 1972. Before this date, therefore, United Kingdom Trade Associations or firms intending to submit evidence to the Tariff Board should so advise the Commercial Relations and Exports Division, quoting reference No. CRE 2760/71.

CRE Ext. 2318/2319

RESULT OF DUMPING TARIFF BOARD INQUIRY ON DIACETONE ALCOHOL: A notice was published in the *Board of Trade Journal* on April 29, 1970, to the effect that a reference had been made to the Tariff Board under the Australian Tariff (Dumping and Subsidies) Act on diacetone alcohol and certain derivatives thereof (tariff items 29.04.5, 29.04.9 and 29.13.3). The inquiry has now been completed and as a result, dumping has been confirmed and dumping duties imposed retrospectively from May 11, 1970. Ref. No. CRE 777/70.

CRE Ext. 2318/9

New Zealand

CUSTOMS TARIFF: Under a recent Customs Amendment Act New Zealand will on January 1, 1972 introduce a new Customs Tariff.

The most important change incorporated in the new Tariff is the provision of special preferential rates of duty for some goods from developing countries. This provision will give effect to New Zealand's decision to support a United Nation Scheme (United Nation Conference on Trade and Development—UNCTAD) to assist the development of those countries. There is also provision for reductions in the rates of duty on certain Australian goods included in Schedule A of the New Zealand/Australian Free Trade Agreement (NAFTA) and reductions in Most Favoured Nation rates resulting from the Kennedy Round negotiations are also incorporated.

The Tariff will continue to be based on the Brussels Nomenclature but the six figure system of item numbers will, because of strain caused by frequent amendments, be changed to a seven figure system.

The only other amendment to the Tariff arises out of its relationship to the Brussels Tariff Nomenclature. Some changes have been made in the nomenclature and New Zealand has been required to incorporate the corresponding changes in their Tariff. These changes indirectly affected rates of duty on some goods and where necessary action has been taken to ensure that no duty increases result.

Inquiries from British exporters should indicate the goods in which they are interested and quote the Brussels Nomenclature number if possible.

EDB Ext. 401/468/469

Laos

KIP DEVALUATION AND NEW CUSTOMS DUTIES: The Royal Lao Government has announced a 20 per cent devaluation of the Kip (the Laotian unit of currency) with effect from November 8. The new rate is 604 Kip to the US $.

Following from the devaluation, customs duties on certain items have been increased. Tariff Numbers affected are:

04.03	20.06	34.02	58.02	90.08
04.04	20.07	34.05	58.03	90.09
06.03	21.03	37.02	58.04	90.10
08.01	21.04	39.07	60.05	90.25
08.04	21.07	42.01	61.01	All of
08.12	22.01	42.02	61.02	Chapter 91
16.02	22.02	42.03	71.16	92.01
16.03	22.03	42.05	73.31	92.02
16.04	22.05	42.06	84.12	92.11
16.05	22.06	44.27	84.15	92.12
17.01	22.07	50.09	84.41	97.04
17.04	22.08	50.10	85.06	97.06
18.05	22.09	51.04	85.12	98.10
18.06	24.01	52.02	85.14	98.12
19.07	24.02	53.11	85.15	All of
19.08	27.10	54.04	87.02	Chapter 99
20.02	33.04	56.07	87.09	
20.05	33.06	58.01	90.07	

EDB Ext. 420/475

Chile

AMENDMENTS TO IMPORT TARIFF: Chilean Decree Nos. 1030/71, 1535/71, 1694/71 and 1636/71, published in the *Diarios Oficial* of August 27, September 30, October 9 and October 31, 1971 respectively, made various alterations and additions affecting the following Brussels Nomenclature tariff numbers:

09.01.02	Chapter 39	Chapter 73	Chapter 92
12.05	Chapter 42	Chapter 84	93.05
19.07.01	44.28.01	Chapter 85	Chapter 94
21.07.04	48.21.07	Chapter 87	Chapter 97
27.10.02	68.13.01	Chapter 90	

EDB Ext. 474/476/7312

We can offer you a Package Deal—Translations and Secretarial Service for Correspondence, Tenders and Specifications, Sales Literature, Operating and Maintenance Manuals, Catalogues, Camera Copy, Litho Printing, in English and foreign languages.

B.W. INSTRUMENTS AND TECHNICAL SERVICES LIMITED
Translation Dept., 593 Green Lanes, Palmers Green, London, N.13.
(Telephone: 01-886 4866)

OR

LANGUAGE TRANSLATION SERVICES, 5 Marsh Street, Bristol BS1 4AA, (Telephone: Bristol 21381)

MISCELLANEOUS ADVERTISEMENTS

30p per line, minimum £1.50 payable in advance Box No. 50p
Orders for advertisements should be addressed to HM Stationery Office, Room D92, Atlantic House, Holborn Viaduct, London EC1P 1BN
Replies to Box Numbers should be addressed to Box No.—Trade and Industry, Room D92, Atlantic House, Holborn Viaduct, London EC1P 1BN

TYRES AND WASTE RUBBER. The Sterling Tyre Co. Ltd., are exporters of tyres and tubes and waste rubber. Huge stocks for sale, all grades and sizes, surplus new and good part-worn, repairable tyres, tyre casings for remoulding, scrap tyres for industrial purposes expertly graded to customers requirements credit facilities available for approved customers. The Sterling Tyre Co. Ltd., First Avenue, Montague Industrial Estate, Edmonton, London, N.18. Tel: EDMonton 2150.

INDIA AT YOUR FINGER TIPS—The Times of India Directory and Year Book 1971 including Who's Who, is the most authoritative source of information on India today. Price £6.50. Available at Bennett Coleman & Co. Ltd., 3 Albemarle Street, London W1.

ADVERTISING IN *TRADE AND INDUSTRY*

Inquiries about advertising in *Trade and Industry* should be addressed to HMSO, Room D92, Atlantic House, Holborn Viaduct, London EC1P 1BN (01-248 9876 ext 6147).

Peru

PROHIBITIONS: Peruvian Directoral Resolution No. 1989-ICDGI-DEI-71 of November 17, 1971 adds further products to the Peruvian National Register of Manufactured Products. Accordingly these items are now prohibited imports. Parts of the following tariff numbers are affected:
17.04 20.07 21.06 21.07 22.02 23.07 28.28 28.45 31.03 31.05 39.07 40.13 58.02 60.01 60.06 61.02 61.09 65.06 65.07 68.06 70.09 70.14 73.18 73.32 84.21 85.01 85.08 85.09 87.06 90.18 90.28 97.02 97.03 98.02

EDB Ext. 474/476/7312

Guyana

INTRODUCTION OF BRUSSELS TARIFF NOMENCLATURE: The Brussels Tariff Nomenclature which is to be introduced throughout the Commonwealth Caribbean in accordance with a decision of the Council of Ministers of the Caribbean Free Trade Association (CARIFTA) will be put into operation in Guyana with effect from January 1, 1972.

EDB Ext. 7312/474 or 476

United States

CONFECTIONERY QUOTAS: *Trade and Industry* of October 28, 1971 announced provisions for quotas on imports of sweetened chocolate, candy and confectionery falling under US Tariff items 156.30 and 157.10. The US Secretary of Agriculture has now published details of the proposed quota arrangements for the calendar year 1972. The quota is to be 5 per cent of the quantity of sweetened chocolate and confectionery sold in the US in 1970, and on this basis a global figure of 196,641,400 lbs. is to be established. Individual country quotas have been calculated for the six main US suppliers on the basis of their exports to the US in 1968, 1969, and 1970. The allocation proposed for the UK is 69,544,198 lbs. of which 8,380,000 is reserved for chocolate crumb. It is proposed that imports under the quota shall be approved for entry on a first-come first-served basis.

Comments and inquiries may be addressed to CRE 5, Room 423, 1 Victoria St., London SW1H 0ET (FR 3.12.71).

CRE Ext. 2397/3365

VEHICLE SAFETY: The National Highway Traffic Safety Administration have added a new Motor Vehicle Safety Standard 216 to Part 571 of Title 49, US Code of Federal Regulations, that sets minimum strength requirements for a passenger car roof to reduce the likelihood of roof collapse in a rollover accident. The standard provides an alternative to conformity with the rollover test of Standard 208. (FR 8-12-71)

EDB Ext. 455/456/457

ECONOMIC MEASURES: The 10 per cent Import Surcharge imposed by President Nixon with effect from August 16, 1971 has been withdrawn. The surcharge will not be levied on merchandise entered or withdrawn from warehouse for consumption on or after December 20, 1971. **The Job Development Tax Credit** (see *Trade and Industry*, December 23, 1971) will now be applied to *all* eligible machinery and equipment whether it is of foreign or US manufacture. (It would seem, however, that where *foreign* machinery and equipment was ordered or its construction by the taxpayer began, between August 16, 1971 and December 20, 1971 it will not be eligible for the tax credit.) **The Domestic International Sales Corporation (DISC)** provisions (see *Trade and Industry*, December 23, 1971) in the US Revenue Act of 1971 remain. **Prices and Wages Control** in the United States remain.

CRE Ext. 3364

Subscription form for Trade and Industry

To Her Majesty's Stationery Office:

London S.E.1: P.O. Box 569
Manchester 2: Brazennose Street
Cardiff: 109 St. Mary Street
Belfast 1: 7-11 Linenhall Street
Edinburgh 2: 13a Castle Street
Birmingham 1: 258 Broad Street
Bristol 1: 50 Fairfax Street

Enclosed please find £7.60
being one year's subscription to
TRADE AND INDUSTRY
(incorporating the Board of Trade Journal)
The copy should be sent to:

Name .....

Address .....

.....

BRITISH GOVERNMENT CONTRACTORS

These announcements are restricted to firms and companies on the lists of Contractors to H.M. Government Departments.

HARD ENAMEL BADGES ★ CUFF LINKS
CRESTED PEWTER TANKARDS
MEN'S WEAR ACCESSORIES
LEATHER AND PLASTIC BACKED CAR KEY FOBS
Custom made for sales promotion depicting company logos, trade marks, town crests, universities, etc.

MANHATTAN-WINDSOR GROUP
STEWARD STREET, BIRMINGHAM 18, ENGLAND
Telephone: 021-454 6404 **Telex: 338633**

Screwing machines
For Bolts and Pipes,
Portable, for hand and power.
As used by railways, docks, public works and engineers.

James N. Durie & Co. Ltd.
106 Dockfields Road, Shipley, Yorks.
0274 53388.

THE QUEEN'S AWARD TO INDUSTRY
FOR TECHNOLOGICAL INNOVATION
IN AUTOMATED FEED MILLING
TO
SCOTTISH MECHANICAL LIGHT INDUSTRIES LTD

FEED PLANTS **WITHOUT LABOUR**

High quality animal feeds in continuous flow production with low capital outlay and negligible running cost.
From 3 Tons/hr to 15 Tons/hr

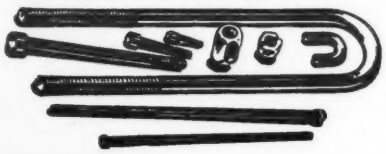
AUTOMATED FEED MILLS LIMITED
SCOTMEC WORK, AYR, SCOTLAND
TEL. AYR (0292) 64601

General sheet metal workers, metal polishers to the trade

Cutting capacity 10′ x ¼″
Brake Press 10′ x ⅛″

Leslie T. Clark
(Stainless Steel Fabrications) Ltd.
Fresh Wharf, Highbridge Road, Barking, Essex.
Telephone: 01-594 5666-7-8
Member of the Stainless Steel Fabricators Association.

Commercial Vehicles and Agricultural Machinery
Through bolts, spring centre bolts, U bolts, wheel studs and nuts, etc. consult



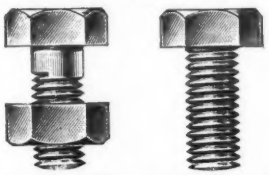
MANUFACTURERS
The Cossentine Bolt & Engineering Co. Ltd.
Industry Works, Farnhill, Keighley, Yorks.
Telephone: Crosshills 2310

Think of PVC binders, wallets and containers. Think of Academy Plastics.

Academy Plastics make all sorts of pvc wallets and containers – to your exact specification.
Loose leaf binders. Catalogue and price list covers.
Cheque book covers and pocket wallets.
Conference wallets and salesmen's albums.
Swatch covers and transparent pockets. Document cases and travel document folders. All from Academy Plastics.

ACADEMY PLASTICS LIMITED
25-29 Roundwood Road, London NW10 9TA
01-459 5277

Bolts and nuts, screws, rivets, studs, studding, washers.
All sizes and types in any material.



Abis & Co (Birmingham) Ltd.
Dennis Road, Sparkbrook, Birmingham, B 12 8BB.
Trunk Dial 021-449 3781 (6 lines)
GKN Bolts & Nuts Accredited Stockist

to advertise in
TRADE AND INDUSTRY

rate card from
HMSO (P3)
Room D92
Atlantic House
Holborn Viaduct
London EC1P 1BN

telephone
01-248 9876 ext 6147/8

FACING MATTER: £64.00 per page and pro rata to ⅛ page

Colour (cover pages II, III and IV): black plus second colour, blue, as used on cover page 1	£ 85.00
black plus two colours, including blue, as used on cover page 1	£ 95.00
black plus three colours	£105.00
Centre 4 pages by arrangement	

Life's been one long giggle since Fred's been in Exports.

You got the order. You're home. What more does your wife expect? You're supposed to be the life and soul of the party? Doesn't she understand that after travelling, entertaining, tummy upsets, and waiting hours for planes that you've had it? She understands all right but she's been alone for six weeks—and a frazzled, humourless Fred isn't much like the man she married.

Some people think that to survive in exports, let alone get to the top, you must be a little crazy, dedicated though you are. We agree because we have our frustrations with the letters of credit to check, the shipping documents, the currency and all the other money matters. Your problems are our problems and we cope with them. Generally speaking we're one of the calmer sides of your life.

The support we give you hasn't changed—but something else has. You've known us for years as Barclays Bank DCO. Now meet us as . . .

BARCLAYS International

A new name today. An even greater future tomorrow.

Registered as a Newspaper. Published by Her Majesty's Stationery Office, Atlantic House, Holborn Viaduct, London, EC1P 1BN, for the Department of Trade and Industry, 1 Victoria Street, London, SW1H 0ET. Printed by The Garden City Press Limited, Pixmore Avenue, Letchworth, Herts, SG6 1JS.
SBN 11 720508 7